Independence at Canyon Springs

Transportation Impact Analysis

Prepared for:
Lewis Management Corporation

Submitted on:
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Introduction

Fehr & Peers has prepared a traffic operations assessment in support of the proposed Independence at Canyon Springs residential project ("Project") located on the northwest corner of Gateway Drive and Canyon Park Drive in the City of Riverside, California (City). This assessment reviews the project's effect on local transportation infrastructure and site access, including intersection of Level of Service (LOS), consistent with the *City of Riverside Traffic Impact Analysis Guidelines* and the *Independence at Canyon Springs Traffic Analysis Scoping Information* memorandum included as **Appendix A** and reviewed by the City of Riverside on October 15, 2025.

To satisfy requirements under the California Environmental Quality Act (CEQA), Fehr & Peers also conducted a Vehicle Miles Traveled (VMT) screening assessment using the City of Riverside's TREDLite VMT estimation tool, consistent with the City of Riverside's CEQA VMT guidelines and applicable requirements, included as **Appendix B**. The VMT assessment determined that the Project is screened from a full VMT analysis as it is located within a low VMT Zone defined by the City.

The following sections present the Project description, study area, and analysis scenarios used in the traffic operations assessment.

Project Description

As shown in **Figure 1,** the Project site is 9.13 acres and is located on the northwest corner of Gateway Drive and Canyon Park Drive intersection. The Project proposes 156 residential units.

The proposed Project also involves an amendment to the Canyon Springs Business Park Specific Plan to allow for the development of mixed-use/multi-family residential uses within Planning Area 8B, a General Plan Amendment to change from the General Plan Land Use designation for the Project site from C - Commercial to MU-U – Mixed Use – Urban (max. 40 du/ac), and a Zoning Code Amendment to rezone the property from O - Office to MU-U – Mixed Use - Urban (40 du/ac).

The Project proposes access through two gated driveways, one full access on Gateway Drive and one right-out (exit only) on Canyon Park Drive. The Project study area encompasses all analyzed intersections and driveways and is shown in Figure 2.

APARTMENTS

NET RENTABLE AREA- INCLUDES WALL THICKNESS OF EXTERIOR WALLS & EXTENDING FROM UNIT-TO-UNIT DEMISING WALL CENTERLINE

	32	20.5%	PLAN 1	1,176 SF, 2 BED, 2 BA
	23	14.7%	PLAN 1Y	1,176 SF, 2 BED, 2 BA
	25	16.0%	PLAN 2	1,477 SF, 3 BED, 2.5 BA
	2	1.3%	PLAN 2Y	1,477 SF, 3 BED, 2.5 BA
	36	23.1%	PLAN 3	1,606 SF, 3 BED, 2.5 BA
	21	13.5%	PLAN 3Y	1,606 SF, 3 BED, 2.5 BA
	5	3.2%	PLAN 3X	1,632 SF, 3 BED, 2.5 BA
	12	7.7%	PLAN 4	1,722 SF, 3 BED, 2.5 BA
	156	100.0%		

BUILDING SUMMARY

	Bldg Type	No. of Bldgs	Area Per Building (rea-sf)	Subtotal	Code Analysis			
					Occupancy Classification	Type of Construction	Fire Sprinklers	Building Code
Residential	B1	13	2,352	30,576	R-3/U	V-B	13D	CRC 2022
	B1X	6	2,782	16,692				
	B1XY	1	2,782	2,782				
	B1Y	10	2,352	23,520				
	B1YM	1	2,352	2,352				
	B2	9	3,083	27,747				
	B2Y	2	3,083	6,166				
	B2Z	8	2,954	23,632				
	B3	8	3,212	25,696				
	B3Y	9	3,212	28,908				
	B3X	5	3,238	16,190				
	B4	6	3,444	20,664				
	Total	78		224,925				
Common Areas	Leasing Building	1	1,308	1,308	B/S2	V-B	13	CBC 2022
	Fitness Building	1	2,095	2,095	B	V-B	13	
	Maintenance Building	1	600	600	U	V-B	NONE	
	Mail Building	1	255	255	U	V-B	NONE	
	Trash Enclosure	1	448	448	U	V-B	NONE	
	Total	5		4,706				

REQUIRED PARKING

PER SECTION 19.580.060 RMC
"Dwelling-Single Family"

	No. of Units	Ratio Required	No. of Stalls	Total
2BD Duplex	55	2	110	312
3BD Duplex	101	2	202	
Total	**156**		312	**312**
Parking Ratio				**2.00**

PROVIDED PARKING

Parking Type	Stall Size	No. of Stalls		
		Covered	Open	Total
Surface Standard Partially Covered Stalls Plan 1 Floor Plan	9' x 18' (16'+ 2' Overhang)	51		308
Garage Stalls	10' x 20'	257		
Surface Standard	9' x 18'		23	48
Surface Parallel	8' x 22'		21	
Surface Standard HC	9'+5' x 18'		2	
Surface Standard HC Van	9' +8' x 18'		2	
Total		308	48	**356**
Parking Ratio				**2.28**



PROJECT SUMMARY:

ADDRESS:	**NWC OF GATEWAY DRIVE & CANYON PARK, RIVERSIDE, 92507**
SITE AREA:	**9.13 ACRES (+/- 397,468 SF)**
ZONE:	**CANYON SPRINGS BUSINESS PARK SPECIFIC PLAN**
DENSITY:	**156 UNITS/9.13 AC= 17.1 DU/AC**
TOTAL UNITS:	**156**
TOTAL BUILDINGS:	**78 DUPLEXES + 5 COMMON AREA BUILDINGS**
PROPOSED MAX HEIGHT:	**29'-9"**
NO OF STORY:	**2-STORY @ DUPLEXES 1-STORY AT COMMON BUILDINGS**

INDEPENDENCE AT CANYON SPRINGS — RIVERSIDE, CA

0 25' 50' 100' 200'

A.1.0 SITE PLAN

LS BTR DEVELOPMENT, LLC
1156 N. MOUNTAIN AVENUE, UPLAND CA 91786
PHONE: (909) 985-0971

LEWIS GROUP OF COMPANIES

ANGELENO ASSOCIATES, INC.
147 E. CITY PLACE DR. SANTA ANA CA 92705
PHONE: (714) 285-1888

08.07.25
JOB: 2305

Figure 1

Project Site Plan

Fehr & Peers

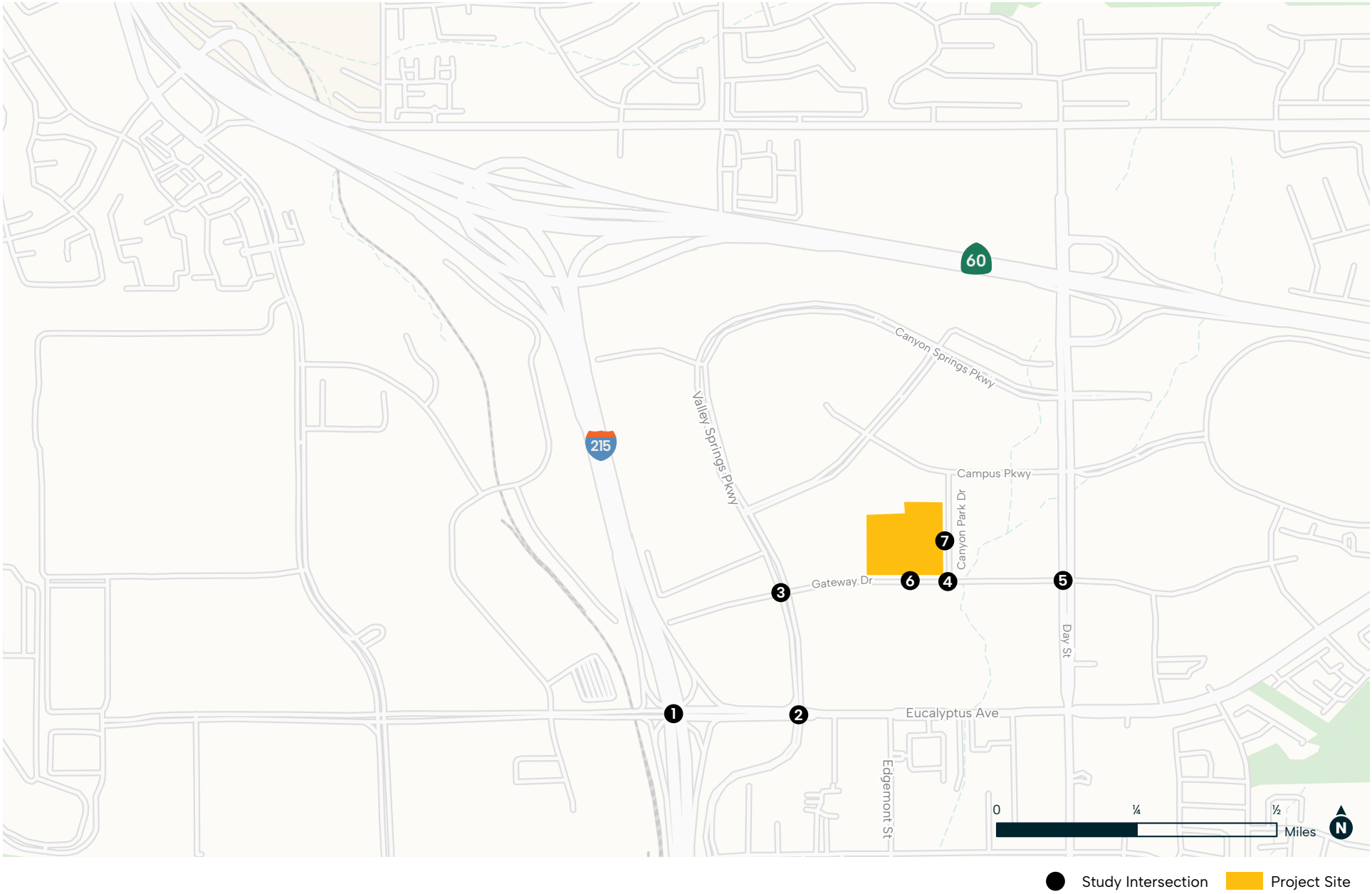


FIGURE 2

Project Site and Study Intersections

Fehr & Peers

Existing Conditions

This section describes the existing transportation conditions in the Project study area, including the roadway network and the transit, pedestrian, and bicycle facilities in the vicinity of the Project site.

Roadway System

Regional access to the study area is provided by Interstate 215. Local access to the site is provided by Gateway Drive and Canyon Park Drive.

Interstate 215 (I-215) is a north–south Interstate highway in California that provides regional access between Riverside, San Bernardino, and the greater Interstate 15 corridor. I-215 runs through the City and serves as a primary regional connection to the Project site. In the Project study area, I-215 generally provides two to four lanes in each direction.

Eucalyptus Ave is an east-west arterial that extends from the Eastern City boundary to River Ridge Road. Eucalyptus Ave is generally two lanes in each direction near the Project site. There is on-street parking on both sides of the road and Class III bike lane with a sharrow marking.

Valley Springs Parkway is a minor arterial that runs north-south. There are sidewalks on both sides of the road with three lanes in each direction.

Gateway Drive is a collector that runs east-west from Valley Springs Parkway to Day Street. There are two lanes in each direction with on-street parking and sidewalks on both sides of the road.

Canyon Park Drive is a collector that runs north-south from Gateway Drive to Campus Parkway. There are two lanes in each direction with on-street parking and sidewalks on both sides of the road.

Day Street is an arterial that runs north-south from Old 215 Frontage Road to Box Springs Road/Ironwood Ave. There are generally three lanes in each direction with sidewalks on both sides of the road near the Project site.

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signals, and multi-use trails. Sidewalks are provided along most roadways near the Project Site, where land uses have been developed adjacent to the roadway. Most signalized intersections in the study area have marked crosswalks or pedestrian signals, except for the eastbound approach at the Valley Springs Parkway and Eucalyptus Ave intersection.

Transit Service

Riverside Transit Agency (RTA) provides regional bus transit service in western Riverside County. The nearest bus stop to the Project site is approximately 1,000 feet away along Day Street to the east, which services RTA Route 16. RTA Route 16 provides service between the University of California Riverside (UCR) and the Moreno Valley Mall, with 15-minute frequencies during weekday peak commute hours and 30-minute frequencies on weekends.

Bicycle Facilities

Within the study area, there are class III bike routes along Eucalyptus Ave between Valley Springs Parkway and Day Street. Bicycle facilities are typically classified into four classifications, 1) Class I

Bike Paths, 2) Class II Bike Lanes, 3) Class III Bike Routes, and 4) Class IV Protected Bike Lanes. There are no bicycle facilities adjacent to the Project site.

Project Characteristics

This section provides an overview of the Project and describes the trip generation, trip distribution, and trip assignment characteristics for the Project, which allows for an evaluation of the effect of the Project on the operating conditions of the surrounding roadway network. The amount of Project traffic volume projected to be added to the transportation system was estimated using a three-step process:

1. Trip Generation – The *amount* of vehicle traffic entering/exiting the site was estimated.
2. Trip Distribution – The *direction* trips will use to approach and depart the area was projected.
3. Trip Assignment – Trips were then *assigned* to specific roadway segments and intersection turning movements based on likely paths of travel.

Project Trip Generation

Trip generation refers to the process of estimating the level of vehicle traffic that could be generated by a new area of development. The Trip Generation Manual, 12th Edition (Institute of Transportation Engineers [ITE], 2025) was used to estimate the number of daily, morning (AM) peak hour, and evening (PM) peak hour trips associated with the Project. The following ITE land use classifications were used to estimate the Project's trip generation:

- Trip rates from Land Use 215: Single Family Residential

The Project is expected to generate 1,025 net new daily trips, approximately 73 net new external trips (18 inbound/55 outbound) during the AM peak hour, and 80 net new external trips (46 inbound/34 outbound) during the PM peak hour, as presented in Table 1.

Table 1: Vehicle Trip Generation Estimates

Land Use	Size	Estimated Trip Generation						
		Daily	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Single Family Residential[1] (ITE Code 215)	156 DU	1,025	18	55	73	46	34	80

Notes:
1. Average trip rates for ITE Code 215: Daily = 6.57; AM Peak Hour = 0.47 (25% In, 75% Out), PM Peak Hour = 0.51 (57% In, 43% Out)
Sources:
Trip Generation Manual, 12th Edition (Institute of Transportation Engineers, 2025)

Project Trip Distribution

Project trip distribution refers to the directions of approach and departure that vehicles would use to travel to and from the Project site. Surrounding land uses, existing roadway characteristics and local knowledge were used to develop the trip distribution. The Project trip distribution is presented in **Figure 3**.

Project Trip Assignment

Project trip assignment refers to the specific route and roadway segments vehicles would take to access the Project. Using the trip distribution percentages, Project trips were then assigned to the roadway network as presented in **Figure 4**.

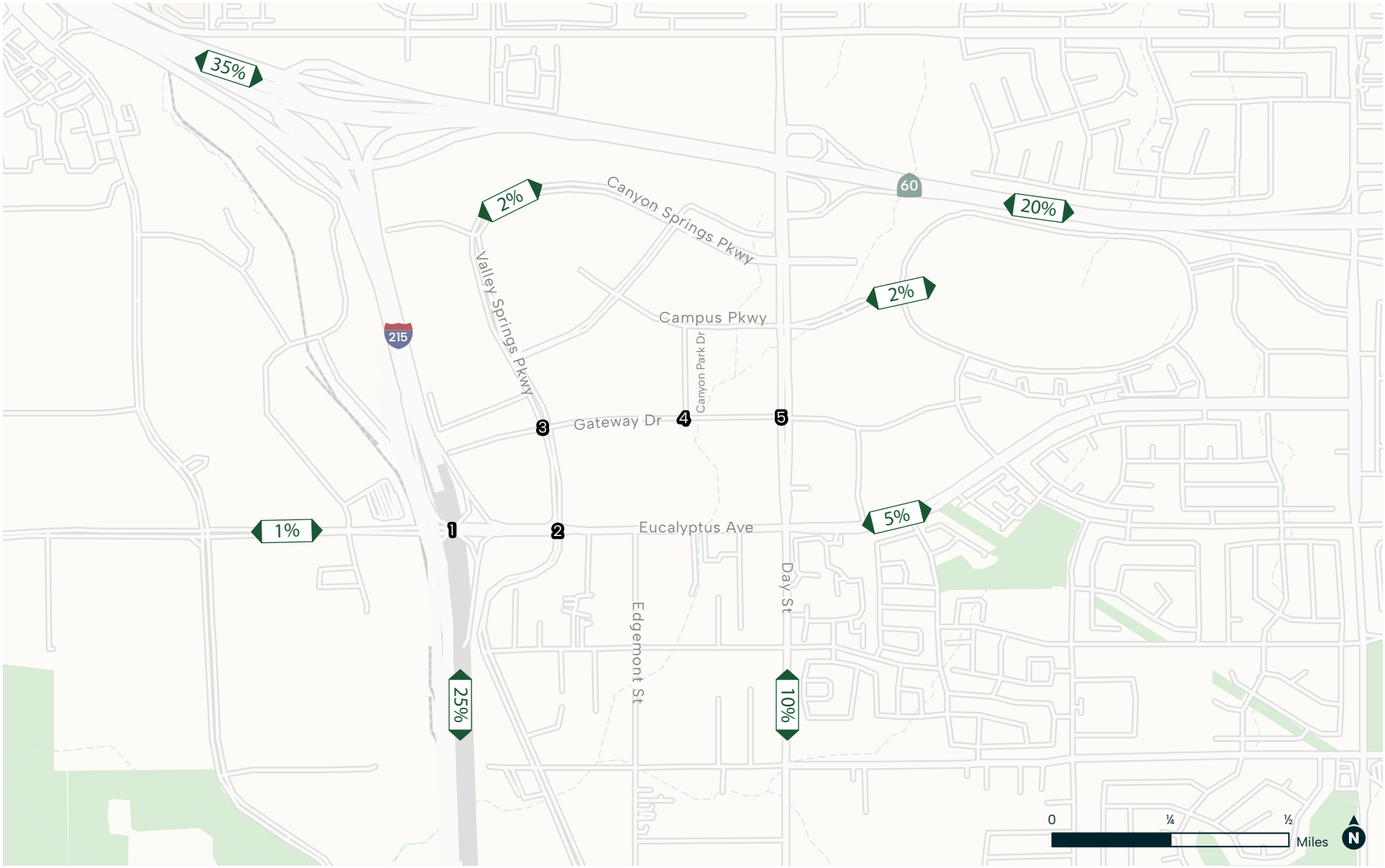


FIGURE 3

Project Trip Distribution

Fehr & Peers

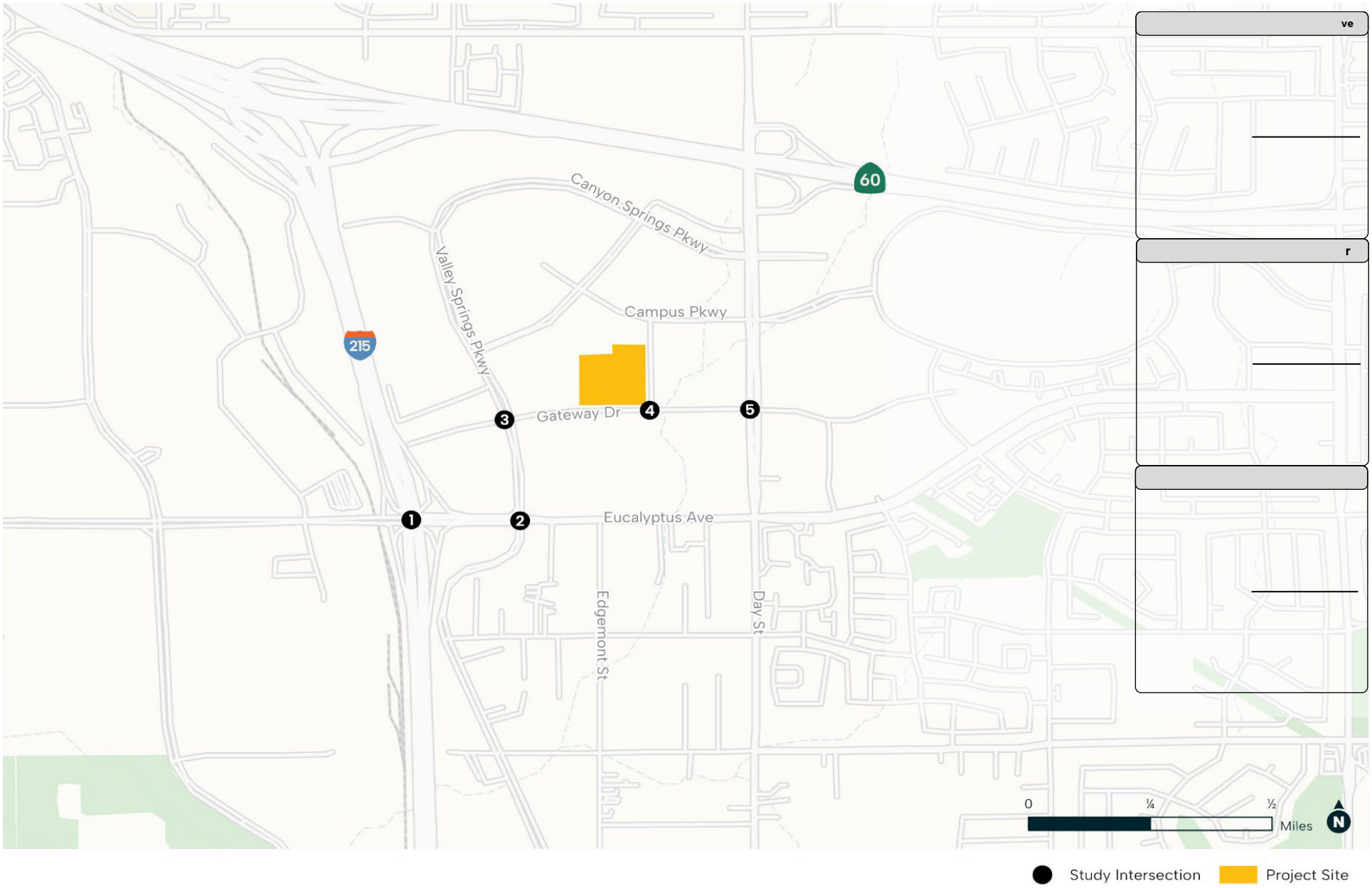


FIGURE 4

Project Trip Assignment

Traffic Operations Assessment

The Level of Service (LOS) Assessment is an operational analysis intended to assess the potential improvements the Project may trigger on the surrounding roadway network. The addition of Project traffic may adversely affect the operations of an intersection within the study area and require improvements.

The following intersections were selected for evaluation:

1. I-215 Ramps & Eucalyptus Ave
2. Valley Springs Parkway & Eucalyptus Ave
3. Valley Springs Parkway & Gateway Drive
4. Canyon Park Drive & Gateway Drive
5. Day Street & Gateway Drive

Intersections 6 and 7 are the Project driveways and are discussed in the Site Access Assessment chapter later in the report.

Analysis Scenarios

Operations of the study intersections were evaluated for the following scenarios based on the City of Riverside adopted *Traffic Impact Analysis Guidelines* (July 2020):

- Existing (2025) Conditions – 2025 traffic turning movement counts collected at study area intersections.
- Near-Term (2028) without Project Conditions – Projected traffic volumes and future approved and pending projects in the study area using the Riverside Countywide model (RIVCOM) for the project's opening year, without the Project
- Near-Term (2028) with Project Conditions – Projected traffic volumes and future approved and pending projects in the study area using the Riverside Countywide model (RIVCOM) for the project's opening year, with the Project
- Cumulative (2045) without Project Conditions – Projected traffic volumes and future approved and pending projects in the study area using the Riverside Countywide model (RIVCOM) for 15-year horizon from opening year, without the Project
- Cumulative (2045) with Project Conditions – Projected traffic volumes and future approved and pending projects in the study area using RIVCOM for the 15-year horizon from opening year, with the Project

Analysis Methodology

Intersection operations were evaluated using the latest Transportation Research Board (TRB) Highway Capacity Manual (HCM) methodology, which is considered state-of-the-practice methodology for evaluating signalized and unsignalized intersection operations, and consistent with the City of Riverside TIA Guidelines. The HCM Edition Methodology estimates a quantitative delay at intersections. After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) A (free-flow operations) to LOS F (over-capacity). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in **Table 2**.

The City of Riverside has adopted LOS D as the minimum standard of operation for all intersections within the study area.

Table 2: Intersection LOS Criteria

Level of Service	Description	Signalized Delay (Seconds)	Unsignalized Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	≤ 10.0	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0	>10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0	>15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0	>25.0 to 35.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0	>35.0 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	> 80.0	>50.0

Source: *Highway Capacity Manual 7th Edition* (Transportation Research Board, 2020).

Existing Conditions

Weekday morning (AM) and evening (PM) peak period intersection turning movement counts were conducted at the study intersections in October 2025 on a typical week with fair weather conditions while school was in session. Traffic counts at the study intersections were collected on a single day between 7:00 to 9:00 AM and 4:00 to 6:00 PM. Traffic counts are provided in **Appendix C**.

For the study intersections, the single hour with the highest traffic volumes during each count period was identified. The AM peak hour in the Project study area is 7:00 to 8:00 AM and the PM peak hour is 4:00 to 5:00 PM. The peak hour intersection turning movement counts are presented in **Figure 5** along with the existing lane configuration and traffic control.

Intersection Operations

Intersection operations under Existing Conditions were evaluated using the HCM methodology with results summarized in **Table 3**. Observed peak hour factors were used at all intersections. Intersection LOS calculation worksheets are provided in **Appendix D**.

Under Existing Conditions, the study intersection operates at LOS D or better during the AM and PM peak hours.

	Intersection	Control	Peak Hour	Existing Conditions[1]	
				LOS	Delay
1	I-215 Ramps & Eucalyptus Ave	Signal	AM PM	D D	48.1 38.4
2	Valley Springs Parkway & Eucalyptus Ave	Signal	AM PM	D C	45.6 22.0
3	Valley Springs Parkway & Gateway Drive	Signal	AM PM	A A	6.8 8.7
4	Canyon Park Drive & Gateway Drive	Signal	AM PM	B B	13.0 18.0
5	Day Street & Gateway Drive	Signal	AM PM	B B	15.2 17.3

Source: Fehr & Peers, 2025

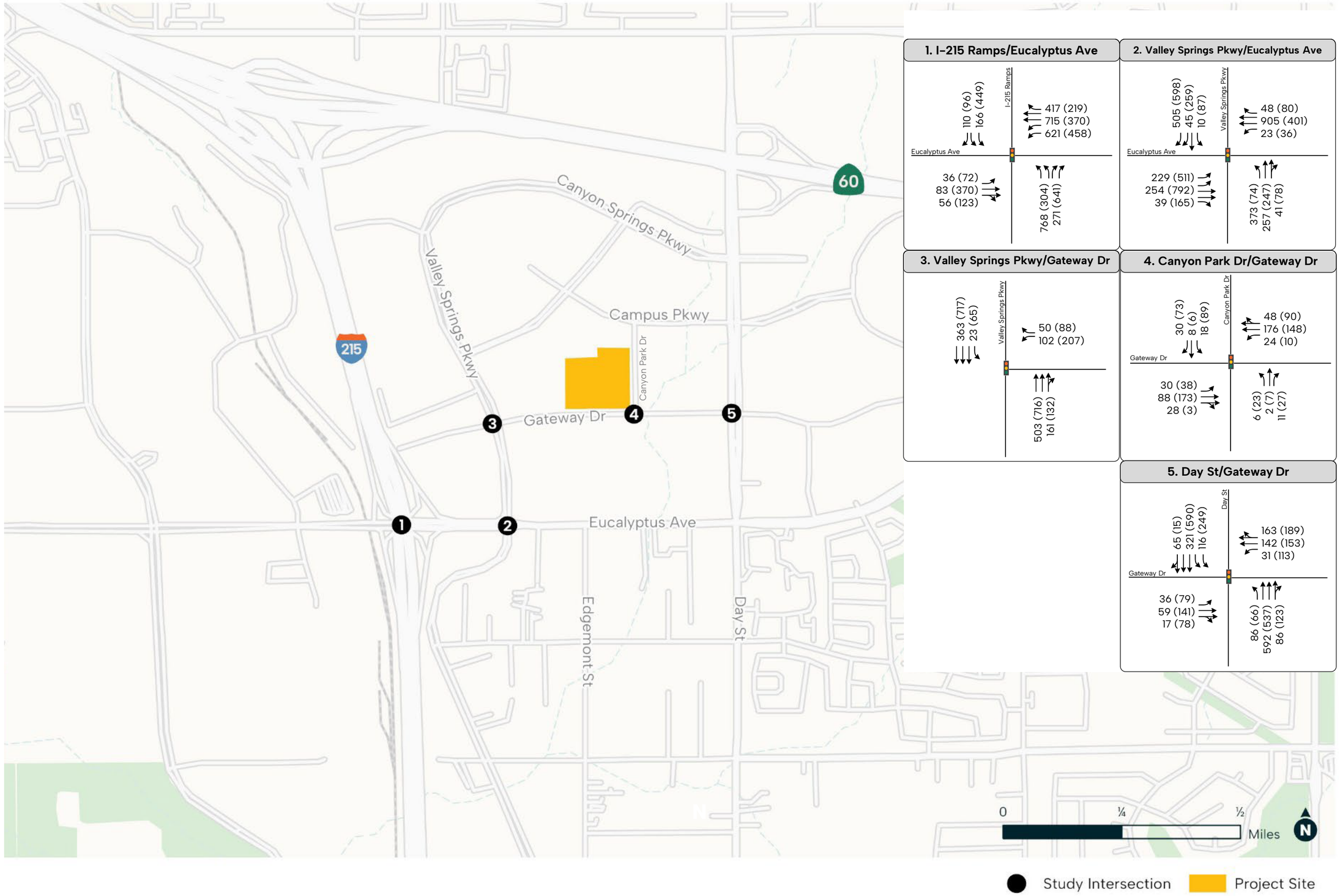


FIGURE #5

Existing (2025)
Peak Hour Intersection Turning Movement Volumes

Fehr & Peers

Near-Term (2028) Conditions

This section presents intersection operations under Near-Term (2028) Conditions without and with the proposed Project. Near-Term without Project Conditions represent projected traffic volumes expected to occur by the time the proposed Project will be operational.

Traffic Volume Development

Near-Term (2028) forecasts were developed to account for ambient growth. Growth from adjacent developments, including the hospital and assisted living project located at the northeast corner of Valley Springs Parkway and Gateway Drive, was reviewed and compared against the Near-Term (2028) intersection traffic forecasts.[1] This review confirmed that the modeling assumptions used to develop the Near-Term without Project conditions appropriately accounted for the anticipated increase in traffic volumes associated with these nearby developments

Near-Term (2028) without Project intersection turning movement forecasts are presented in **Figure 6**. Project trips from **Figure 4** were then added to develop Near-Term (2028) with Project intersection turning movement forecasts, as presented in **Figure 7.**

Intersection Operations

Near-Term (2028) intersection operations were evaluated using the HCM methodology. Bicycle and pedestrian volumes, peak hour factors, and traffic signal timings are consistent with Existing Conditions. Intersection operations under Near-Term (2028) Conditions, with and without the Project, are presented in **Table 4**.[2] Intersection LOS calculation worksheets are provided in **Appendix D**.

Under Near-Term (2028) without Project and with Project Conditions, the following study intersection would have deficient operation during at least one peak hour:

- Valley Springs Parkway & Eucalyptus Ave (Intersection 2) would operate at LOS E during the AM peak hour.

Table 4: Near-Term Year (2028) Conditions Intersection Levels of Service

	Intersection	Control	Peak Hour	Near-Term Without Project		Near-Term With Project		Near-Term with Project Improvements	
				LOS	Delay	LOS	Delay	LOS	Delay
1	I-215 Ramps & Eucalyptus Ave	Signal	AM	D	52.1	D	52.0	-	-
			PM	D	39.7	D	39.9	-	-
2	Valley Springs Parkway & Eucalyptus Ave	Signal	AM	**E**	**65.8**	**E**	**67.9**	D	40.0
			PM	C	23.6	C	23.8	-	-

[1] City of Riverside Community & Economic Development Department. "Development Projects and CEQA Documents." *City of Riverside*, https://riversideca.gov/cedd/planning/development-projects-and-ceqa-documents

[2] Under existing condition, pedestrian and bicycle volumes were assumed to be 5 and 2 per hour, respectively as the project is in an area with low pedestrian and bicycle activity.

	Intersection	Control	Peak Hour	Near-Term Without Project		Near-Term With Project		Near-Term with Project Improvements	
				LOS	Delay	LOS	Delay	LOS	Delay
3	Valley Springs Parkway & Gateway Drive	Signal	AM	A	7.6	A	7.9	-	-
			PM	A	8.9	A	9.2	-	-
4	Canyon Park Drive & Gateway Drive	Signal	AM	B	14.2	B	14.9	-	-
			PM	B	18.8	B	18.8	-	-
5	Day Street & Gateway Drive	Signal	AM	B	16.0	B	16.6	-	-
			PM	B	19.0	B	19.1	-	-

Notes:

1. Deficient intersection operations (LOS E or F) are noted in **bold text**.

Source: Fehr & Peers, 2025

Improvements

The following improvements would make operations acceptable at the deficient intersection, as shown in **Table 4**.

INTERSECTION 2 – Under Near-Term (2028) Conditions, the addition of traffic from ambient growth would continue to operate at LOS E during the AM peak hours for both scenarios (with and without the Project).

RECOMMENDATION 1:

- Intersection 2: Add a second northbound left turn lane.

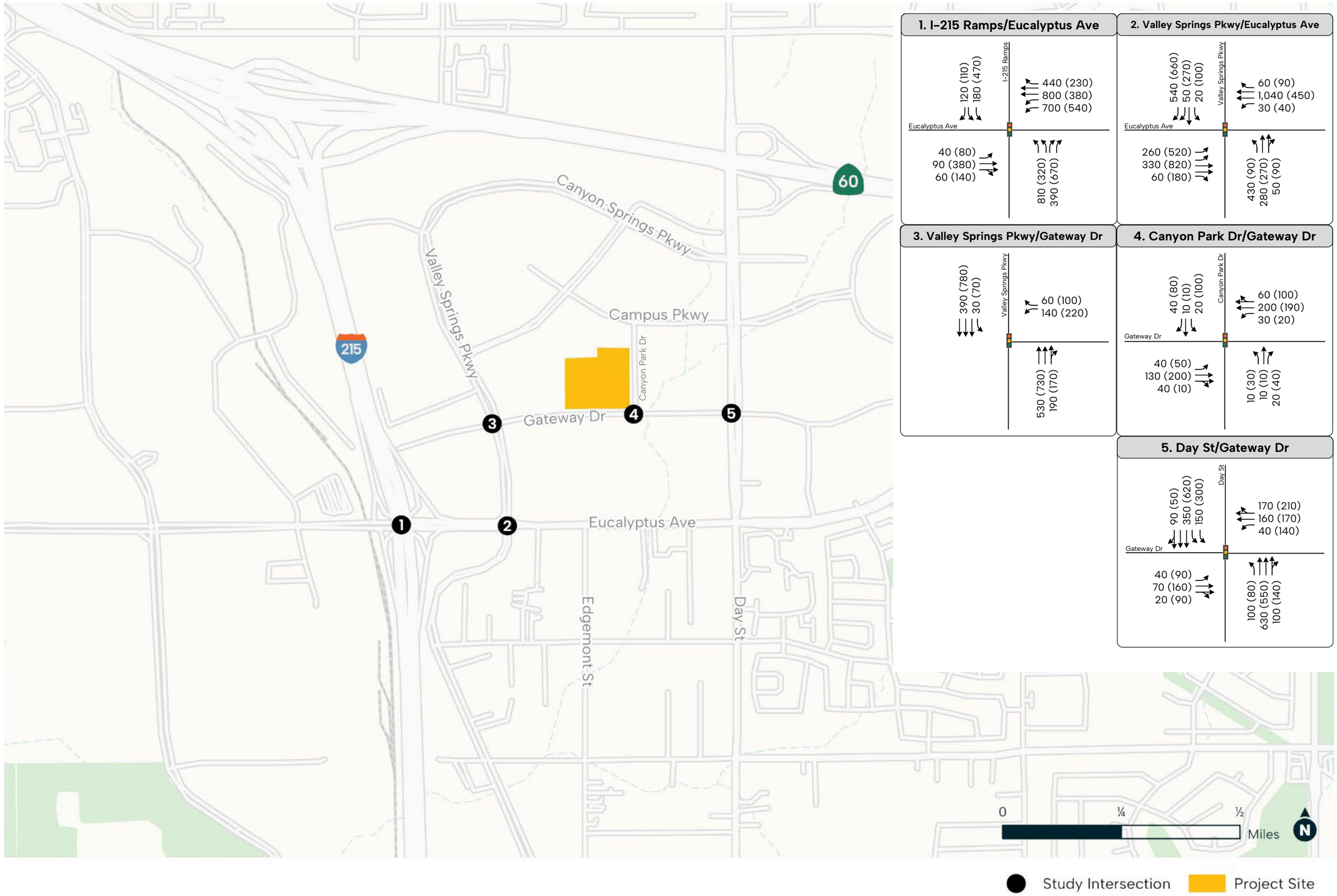


FIGURE #6

Opening Year (2028) No Project
Intersection Turning Movement Volumes

Fehr & Peers

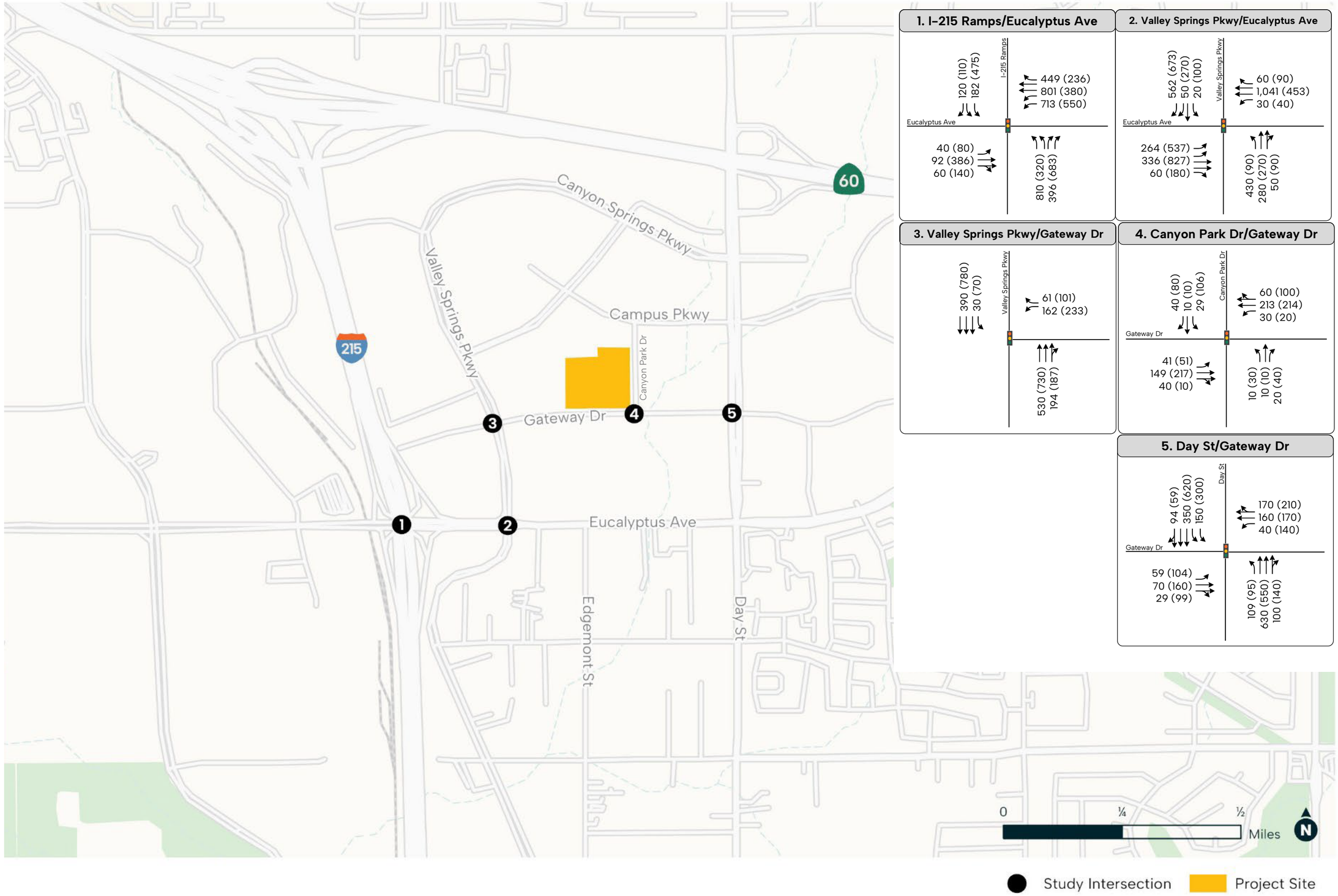


FIGURE #7

Opening Year (2028) with Project Intersection Turning Movement Volumes

Fehr & Peers

Cumulative (2045) Conditions

This section presents intersection operations under Cumulative (2045) Conditions without and with the Project. Cumulative without Project conditions are defined as existing volumes plus traffic generated by planned regional growth, and the cumulative project growth using planned projects in the surrounding study area.

Traffic Volume Development

Cumulative Year (2045) turning movement forecasts were developed using the difference method per the National Cooperative Highway Research Program (NCHRP) Report 255 methodology to account for ambient growth, which was agreed upon with the City in the scoping memorandum (**Appendix A**). Project-related growth from adjacent developments, including the hospital and assisted living project located at the northeast corner of Valley Springs Parkway and Gateway Drive, was reviewed and compared against the Cumulative Year (2045) intersection traffic forecasts. This review confirmed that the modeling assumptions used to develop the Cumulative without Project conditions appropriately accounted for the anticipated increase in traffic volumes associated with these nearby developments.

Cumulative Year (2045) without Project intersection turning movement forecasts are presented in **Figure 8**. Project trips from **Figure 4** were then added to develop Cumulative Year (2045) with Project intersection turning movement forecasts, as presented in **Figure 9.**

Intersection Operations

Cumulative (2045) intersection operations were evaluated using the HCM methodology. Intersection operations under Cumulative (2035) Conditions, with and without the Project, are presented in **Table 5**. Intersection LOS calculation worksheets are provided in **Appendix D**.

Under Cumulative (2045) without and with Project Conditions, the following study intersection would have deficient operation during at least one peak hour:

- Valley Springs Pkwy & Eucalyptus Ave (Intersection 2) would operate at LOS F during the AM peak hour for both scenarios (with and without the Project).

Table 5: Cumulative Year (2045) Conditions Intersection Levels of Service

	Intersection	Control	Peak Hour	Cumulative Without Project		Cumulative With Project		Cumulative With Project with Improvements	
				LOS	Delay	LOS	Delay	LOS	Delay
1	I-215 Ramps & Eucalyptus Ave	Signal	AM	D	45.0	D	45.1	-	-
			PM	D	48.1	D	42.1	-	-
2	Valley Springs Pkwy & Eucalyptus Ave	Signal	AM	**F**	**166.6**	**F**	**169.1**	D	53.8
			PM	C	28.3	C	28.8	-	-
3	Valley Springs Pkwy & Gateway Dr	Signal	AM	A	9.3	A	9.7	-	-
			PM	A	9.7	A	10.0	-	-
4	Canyon Park Dr & Gateway Dr	Signal	AM	B	14.1	B	14.8	-	-
			PM	B	19.1	B	19.2	-	-
5	Day St & Gateway Dr	Signal	AM	B	18.4	B	18.9	-	-
			PM	C	22.7	C	22.8	-	-

Notes:
1. Deficient intersection operations (LOS E or F) are noted in **bold text**.
2. SSSC = Side-street stop controlled. For SSC, the approach with the greatest delay is reported.

Source: Fehr & Peers, 2025

Improvements

The following improvements would improve operations to be acceptable or better at the deficient intersection, as shown in **Table 5**.

RECOMMENDATION 2:

Intersection 2: . To bring the intersection to LOS D or better, add a second northbound left turn lane and an additional westbound through lane is needed, which is consistent with the City's General Plan classification and the WRCOG TUMF program for Eucalyptus Ave.

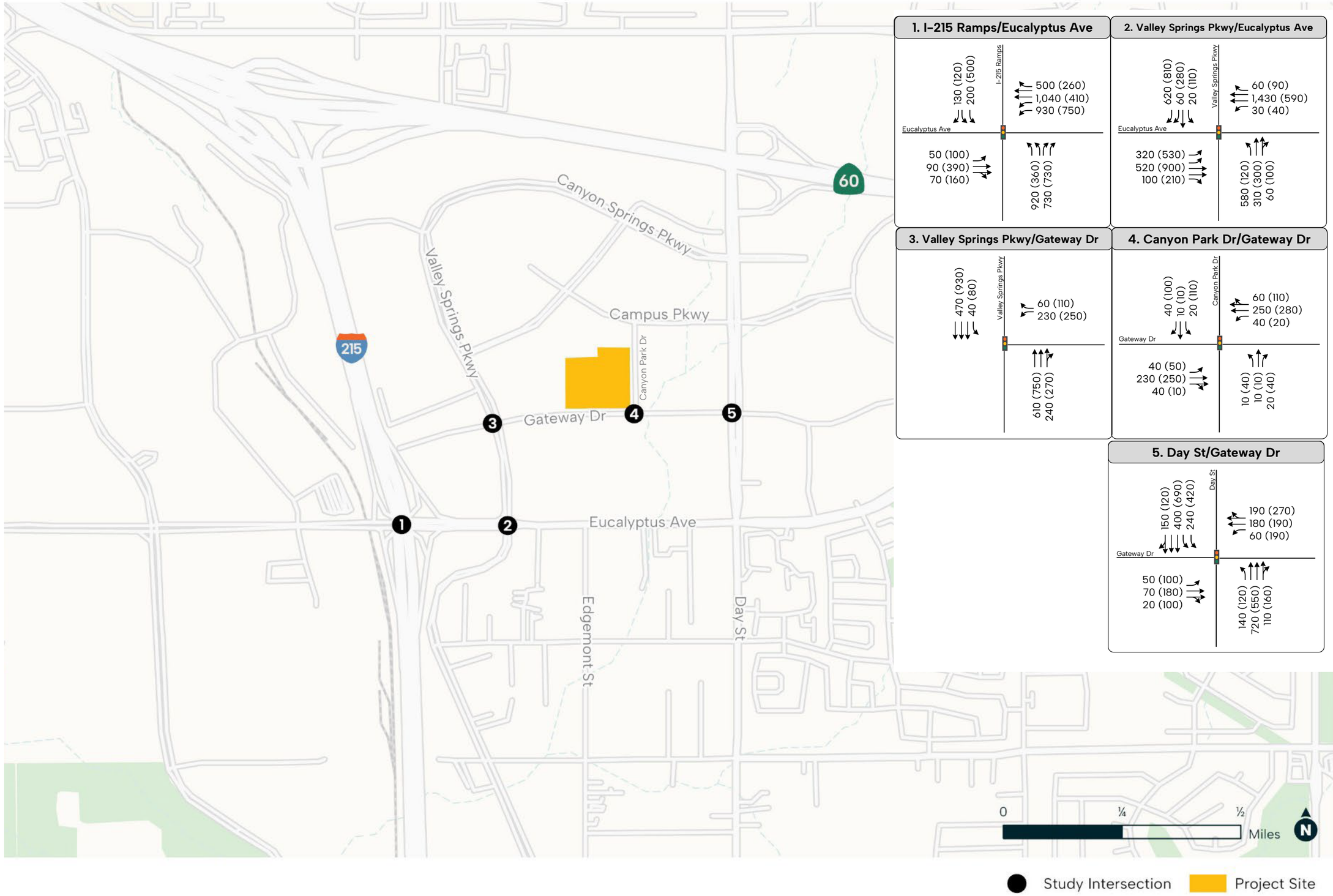


FIGURE #8

Cumulative Horizon (2045) No Project Intersection Turning Movement Volumes

Fehr & Peers

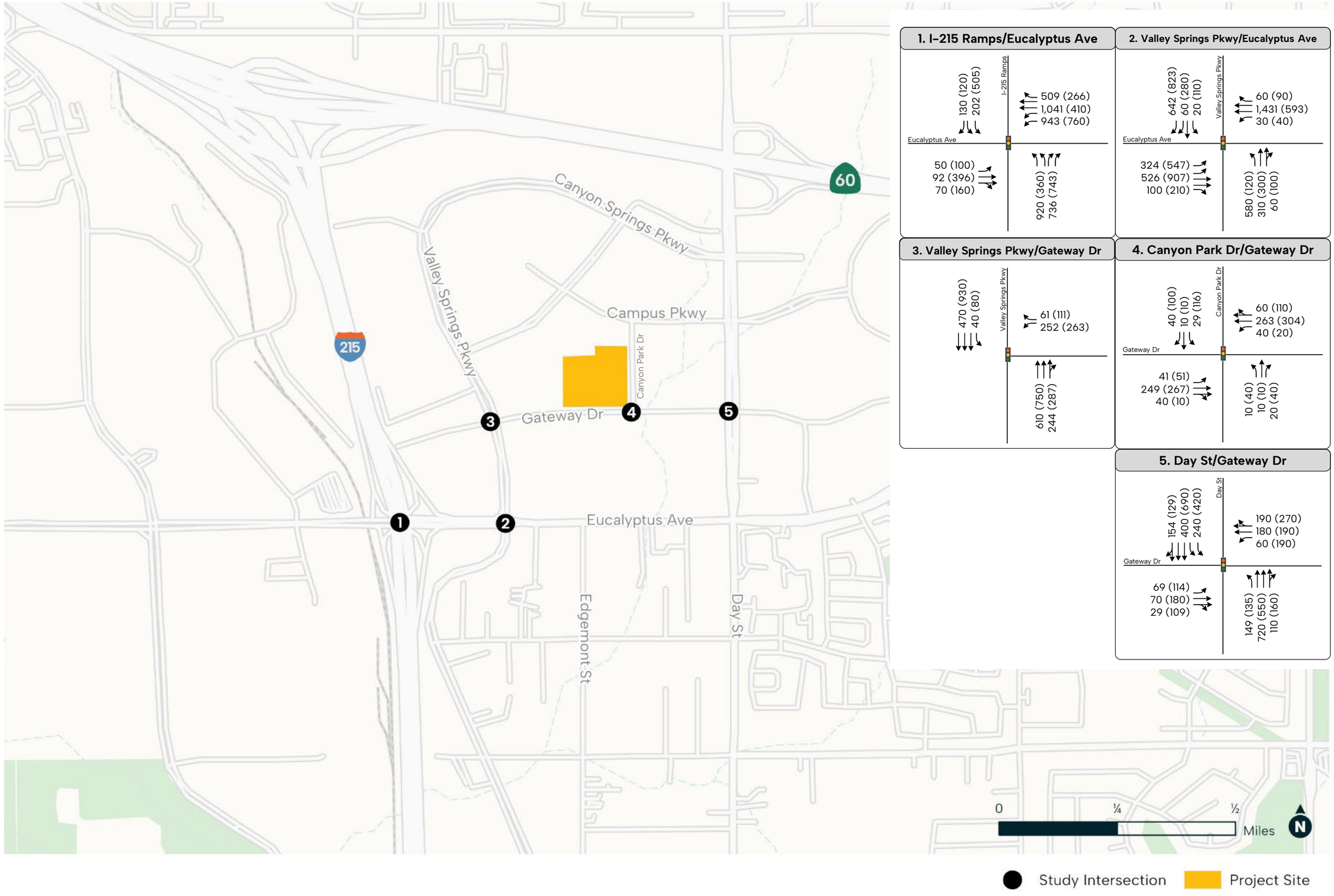


FIGURE #9

Cumulative Horizon (2045) with Project Intersection Turning Movement Volumes

Fair Share Contribution

The intersection improvements identified above are to add a second northbound left turn lane in the near term year at Valley Springs Pkwy & Eucalyptus Ave, and the same plus an additional westbound through lane in the cumulative year. The widening of Eucalyptus Avenue which would include the new westbound through lane is currently programmed through the WRCOG Traffic Uniform Mitigation Fee (TUMF) program. The project's contribution to this improvement would be included in the TUMF fees. The second northbound left turn lane is not currently planned by the City of Riverside, the City of Moreno Valley, or any adopted funding program. As such, a fair share estimate was calculated for each deficient location based on the Project's proportionate share of new traffic, consistent with the City of Riverside; s adopted *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (July 2020).

Fair share contributions for the full Project are summarized in **Table 8**. The proposed Project is not anticipated to be solely responsible for infrastructure improvements that are also necessitated by ambient growth over a ten-year horizon. Accordingly, the Project is expected to contribute its fair share toward the necessary improvements at the time they are implemented. The Project's fair share cost of improvements is determined based on the following equation, which is the ratio of Project traffic to new traffic, where new traffic is total future traffic less existing baseline traffic:

Project Fair Share % = Project Traffic / (2045 No Project Traffic + Project Traffic)

Table 8 provides a summary of the proposed improvements at each intersection and outlines the Project's fair share responsibility where applicable.

Table 8. Proposed Improvements and Fair Share Contribution

	Intersection	Improvements	Project Responsibility	2045 Traffic No Project	Project Traffic	Fair Share %
2	Valley Springs Pkwy & Eucalyptus Ave	Add a second northbound left lane[1]	Fair Share	AM: 4,110 PM: 4,080	33 40	0.80% 0.97%
		Add an additional westbound through lane	TUMF Fees	--	--	--

1. A high-level cost estimate (no detailed for construction engineering drawings or cost estimates have been prepared as part of this study) to implement this improvement would be approximately $250,000, which would include restriping and updating traffic signal timings. The project's fair share contribution would be approximately $2,425.

Conclusions and Recommendations

As identified above, the project increases vehicle delay at the deficient intersection of Valley Springs Parkway and Eucalyptus Avenue. Improvements have been identified that would decrease the vehicle delay and allow the intersection to operate at an acceptable LOS D.

In addition to the project's fair share contribution and contribution to TUMF fees for these improvements, at the direction of the City of Riverside Traffic Division, the project will be conditioned to also provide the following improvements:

1. Install a Battery Backup System at the intersection of Gateway Drive and Canyon Park Drive. The Traffic Division will include this improvement as a condition of approval; therefore, no signal modification plan is required at this time. The project applicant shall submit the improvement plans during the final plan check process after the project has been entitled.
2. Upgrade the existing crosswalks to continental-style crosswalks at the intersection of Campus Parkway and Canyon Park Drive. The Traffic Division will include these improvements as conditions of approval; therefore, no signing and striping plan is required at this time. The project applicant shall submit the improvement plans during the final plan check process after the project has been entitled.

VMT Screening Assessment

In accordance with SB 743, a VMT screening assessment was conducted for the proposed project to measure the significance of transportation impact related to VMT. The City's traffic impact analysis guidelines and TREDLite (Trip Reduction & the Environmental Dashboard) VMT tool provided a process for projects to be screened from full VMT assessment under the assumption that the project will result in a less-than-significant transportation impact related to VMT. Our assessment has been performed consistent with the *City of Riverside's Traffic Impact Analysis Guidelines (July 2020)*.

VMT Methodology

The City guidelines have three types of screening criteria that can screen projects from project-level assessment. The TREDLite VMT estimation tool is used to identify if the project is in a low VMT-generating area. TREDLite uses the latest version of Western Riverside County of Government (WRCOG) travel demand model, RIVCOM to evaluate VMT impacts at the Traffic Analysis Zones (TAZ) level. Daily VMT per capita is estimated for each VMT. TAZs that are below the City's adopted threshold of City of Riverside average daily VMT per capita are considered low VMT zones. Projects that are in the TAZ are assumed to result in similar VMT performance and have VMT per capita below the City's threshold.

Conclusions

Per results of the TREDLite VMT Estimation tool, the project is a residential land use type and located in a low VMT-generating area; the TAZ the project is in generates 14.3 VMT/capita. The City's adopted threshold of significance is 16.2 VMT per capita. Therefore, it is screened from a project-level assessment and assumed to have a less than significant VMT impact. Detailed results of the output is included in **Appendix B**.

Site Access Assessment

Vehicular access to the Project site will be provided by two driveways along Gateway Drive and Canyon Park Drive as previously shown in Figure 1 and 2. The project driveways are listed below:

6. Gateway Drive Project Driveway 1
7. Canyon Park Drive Project Driveway 2

As noted above, Driveway 1 on Gateway Drive would be a full-access driveway, while Driveway 2 on Canyon Park Drive would be right-in/right-out access. Both driveways are proposed to be unsignalized with stop control on the driveway approach.

Based on the anticipated distribution of vehicles at each Project Driveway, driveway operations were evaluated under Cumulative Year (2045) with Project Conditions. Project site access driveway turning movement forecasts are presented in **Figure 4**.

Driveway Operations

Driveway operations were evaluated using the HCM methodology. Driveway operations under Cumulative Year (2045) with Project Conditions are presented in **Table 6**. 95th percentile intersection queue lengths under Cumulative Year (2045) with Project Conditions are summarized in **Table 6**. Driveway LOS calculation worksheets are provided in **Appendix D**.

Under Cumulative Year (2045) with Project Conditions, all driveway intersections would operate at LOS C or better during the AM and PM peak hours, and the 95th percentile vehicle queue would not exceed the storage length for any of the movements/approaches on all driveways.

Table 6: Cumulative Year (2045) Conditions Intersection Level of Service

Intersection		Control[1]	Movement	Peak Hour	95th Percentile Queue (ft) Cumulative Year with Project	
					LOS[2]	Delay[2]
6	Gateway Drive Project Dwy 1	TWSC	SBL SBL	AM PM	B B	11.6 13.0
7	Canyon Park Drive Project Dwy 2	TWSC	EBR EBR	AM PM	A A	8.6 9.0

Notes:
1. TWSC = two way stop controlled intersection
2. For TWSC intersections, LOS/delay is presented as: Intersection Average (Worst Movement).
3. Deficient intersection operations are noted in **bold text**.

Source: Fehr & Peers, 2025

Table 7: Cumulative Year (2045) Conditions Intersection Queue Lengths

	Intersection	Movement/ Approach[1]	Storage Length (ft)	95th Percentile Queue (ft) Cumulative Year with Project	
				AM	PM
6	Gateway Drive Project Dwy 1	SB	90	25	25
7	Canyon Park Drive Project Dwy 2	EB	25	0	0

Notes:
1. EB = Eastbound; SB = Southbound
2. 95th percentile queues that exceed the storage are noted in bold text.

Source: Fehr & Peers, 2025

As the LOS is acceptable and queues do not exceed storage lengths in the cumulative year, the opening year (which is projected to have lower volume than the cumulative year) would also be expected to have acceptable LOS and queues.

Appendix A: Scoping Agreement Memorandum

Traffic Analysis Scoping Form

This scoping form shall be submitted to the City of Riverside Traffic Engineering Division

Project Identification:

Case Number:	PC-2025-005410541
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Independence at Canyon Springs
Project Address:	Northwest of Gateway Drive & Canyon Park, Riverside 92507
Project Opening Year:	2028
Project Description:	156 residential units as part of an amendment to the Canyon Springs Business Park Specific Plan

	Consultant:	**Developer:**
Name:	Fehr & Peers	James Kim, Lewis Management Corp
Address:	3880 Lemon Street, Suite 420	1156 N. Mountain Avenue
	Riverside, CA 92501	Upland, CA 91786
Telephone:	951-274-4800	909-985-0971
Fax/Email:	D.Votsch@fehrandpeers.com	james.kim@lewismc.com

Scoping & Study Fees:

Fees to be made payable to "City of Riverside" and delivered to Land Development. City Hall 3rd Floor, 3900 Main Street, Riverside, CA 92522

1) Scoping Agreement Fee (For all projects not screened from analysis): **$271.00**

2) TIA Review (For projects with both LOS & VMT analysis of any scale, or standalone LOS analyses with over 100 vehicle trips per hour): **$ 2,871.66**

3) TIA Review (For standalone VMT analysis, or standalone LOS analyses with under 100 vehicle trips per hour): **$ 1,385.10**

Trip Generation Information:

Trip Generation Data Source: ITE, 12th Edition (2025)

Current General Plan Land Use: Business/Office Park

Proposed General Plan Land Use: Mixed-Use Urban

Current Zoning: Commercial/Industrial Zones

Proposed Zoning: Mixed-Use Urban

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips						
PM Trips		SEE ATTACHMENT				

Trip Internalization: ☐ Yes ☒ No (_____% Trip Discount)

Pass-By Allowance: ☐ Yes ☒ No (_____% Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses in accordance with City Guidelines?

Is the project screened from LOS assessment? ☐ Yes ☒ No

LOS screening justification (see Page 6 of the guidelines): _____

Is the project screened from VMT assessment? ☒ Yes ☐ No

VMT screening justification (see Pages 23-25 of the guidelines): Per review of the TREDLite VMT estimation tool, the Project is located in a low VMT Area and therefore, screened from VMT assessment. See appendix B.

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):

North	South	East	West
%	**See Attached** %	%	%

- Attach list of Approved and Pending Projects that need to be considered (provided by the lead agency and adjacent agencies)
- Attach list of study intersections/roadway segments
- Attach legible site plan
- Note other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other _____
- Date of Traffic Counts _____
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)
- Study Intersections: please include the study intersections as attachment if it is more than 10

1. **I-215/Ecualyptus Ave**
2. **Valley Springs Pkwy/Eucalyptus Ave**
3. **Valley Springs Pkwy/Gateway Dr**
4. **Canyon Park Dr/Gateway Dr**
5. **Day St/Gateway Dr**
6.
7.
8.
9.
10.

- Study Roadway Segments (For Build-out Studies): Please include the roadway segments as attachment if more than 5

1.
2.
3.
4.
5.

VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model RIVCOM
- Attach TREDLite VMT Estimation output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

Specific Issues to be addressed in the Study (in addition to the standard analysis described in the Guidelines) (To be filled out by the Public Works Traffic Engineering Division)

Fehr & Peers

Memo

Date: September 26, 2025

To: City of Riverside

From: Fehr & Peers

Subject: Independence at Canyon Springs Traffic Analysis Scoping Information

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The following information is presented as an attachment to the Traffic Analysis Scoping Form for the City of Riverside. The information relates to the Independence at Canyon Springs residential project, which is located at the northwest corner of Gateway Drive and Canyon Park in Riverside, CA. The project will consist of 156 residential units. Site access driveways will be provided on Gateway Drive (full access driveway) and Canyon Park Drive (right-in, right-out). The project site plan is presented in **Figure 1.**

Trip Generation Estimate

The project trip generation estimate is presented below in **Table 1.**

Table 1. Project Trip Generation Estimate

Land Use	ITE Code	Quantity	Unit	Daily Trips	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Single Family Residential	215	156	Dwelling Units	1,123	23	52	75	51	38	89

Source: ITE Trip Generation Manual, 12th Edition Fehr & Peers.
Notes:

1. ITE Code 215 Single Family Attached Housing was selected as the proposed residential units are duplexes with a density of 17.1 dwelling units per acre.
2. Daily trip rate = 6.57
3. AM peak hour trip rate – 0.47 (25% entering, 75% exiting)
4. PM peak hour trip rate = 0.51 (57% entering, 43% exiting)

Level of Service Scoping

Trip Distribution and Assignment

The proposed distribution of project trips is presented in **Figure 2.** Trip assignment is presented in **Figure 3.**

Study Intersections and Analysis Scenarios

The following intersections will be studied as part of the Level of Service (LOS) analysis:

1. I-215/Eucalyptus Ave
2. Valley Springs Pkwy/Eucalyptus Ave
3. Valley Springs Pkwy /Gateway Dr
4. Canyon Park Dr/Gateway Dr
5. Day St/Gateway Dr

Traffic counts were collected in the week of 9/29/25. Intersection turning movement data was collected during the AM and PM peak periods (7:00 – 9:00 AM and 4:00 – 6:00 PM). All traffic counts were collected during fair weather, while school is in session, and during a typical (non-holiday) Tuesday, Wednesday, or Thursday.

We anticipated including the following scenarios in the LOS study:

- Existing – Based on traffic counts to be collected in Fall 2025.
- Opening Year 2030 No Project
- Opening Year 2030 Plus Project
- Cumulative Horizon Year 2045 No Project
- Cumulative Horizon Year 2045 Plus Project

As part of this assessment the following will be completed:

- Future Year Forecasts - we will utilize the Riverside Countywide Model (RIVCOM) to develop future forecasts at the study intersections after incorporating approved and pending projects in the study area. We will add the project trip forecasts to the "no project" forecasts to develop traffic volumes for "with project" scenario at the study intersections.
- LOS Analysis – we will utilize the Highway Capacity Manual 7th Edition (2022) to determine the associated LOS for the study intersections and Project driveways under each "no project" and "with project" scenario. We will use intersection signal control information from the appropriate agency. We will report LOS at each study intersection for the AM and PM peak hours. Synchro will be used for the LOS assessment so that existing signal timing parameters will be incorporated into the assessment.

Site Access Assessment

Our team will assess access points, circulation patterns, and overall site functionality, ensuring the design adheres to the City of Riverside and Caltrans guidelines. This will include an evaluation of access driveways and queueing forecasts at study intersections and driveways, as well as documenting planned bike lanes on the project frontage along Gateway Drive. We will evaluate site access for vehicular, pedestrian, and cyclists, including an analysis of right turn lanes at driveways.

APARTMENTS

NET RENTABLE AREA- INCLUDES WALL THICKNESS OF EXTERIOR WALLS & EXTENDING FROM UNIT-TO-UNIT DEMISING WALL CENTERLINE

32	20.5%	PLAN 1	1,176 SF, 2 BED, 2 BA
23	14.7%	PLAN 1Y	1,176 SF, 2 BED, 2 BA
25	16.0%	PLAN 2	1,477 SF, 3 BED, 2.5 BA
2	1.3%	PLAN 2Y	1,477 SF, 3 BED, 2.5 BA
36	23.1%	PLAN 3	1,606 SF, 3 BED, 2.5 BA
21	13.5%	PLAN 3Y	1,606 SF, 3 BED, 2.5 BA
5	3.2%	PLAN 3X	1,632 SF, 3 BED, 2.5 BA
12	7.7%	PLAN 4	1,722 SF, 3 BED, 2.5 BA
156	100.0%		

BUILDING SUMMARY

	Bldg Type	No. of Bldgs	Area Per Building (nra-sf)	Subtotal	Code Analysis			
					Occupancy Classification	Type of Construction	Fire Sprinklers	Building Code
Residential	B1	13	2,352	30,576	R-3/U	V-B	13D	CRC 2022
	B1X	6	2,782	16,692				
	B1XY	1	2,782	2,782				
	B1Y	10	2,352	23,520				
	B1YM	1	2,352	2,352				
	B2	9	3,083	27,747				
	B2Y	2	3,083	6,166				
	B2Z	8	2,954	23,632				
	B3	8	3,212	25,696				
	B3Y	9	3,212	28,908				
	B3X	5	3,238	16,190				
	B4	6	3,444	20,664				
	Total	78		224,925				
Common Areas	Leasing Building	1	1,308	1,308	B/S2	V-B	13	CBC 2022
	Fitness Building	1	2,095	2,095	B	V-B	13	
	Maintenance Building	1	600	600	U	V-B	NONE	
	Mail Building	1	255	255	U	V-B	NONE	
	Trash Enclosure	1	448	448	U	V-B	NONE	
	Total	5		4,706				

REQUIRED PARKING

PER SECTION 19.580.060 RMC "Dwelling-Single Family"

	No. of Units	Ratio Required	No. of Stalls	Total
2BD Duplex	55	2	110	312
3BD Duplex	101	2	202	
Total	**156**		312	**312**
Parking Ratio				**2.00**

PROVIDED PARKING

Parking Type	Stall Size	No. of Stalls		
		Covered	Open	Total
Surface Standard Partially Covered Stalls Plan 1 Floor Plan	9' x 18' (16' + 2' Overhang)	51		308
Garage Stalls	10' x 20'	257		
Surface Standard	9' x 18'		23	48
Surface Parallel	8' x 22'		21	
Surface Standard HC	9'+5' x 18'		2	
Surface Standard HC Van	9' +8' x 18'		2	
Total		308	48	**356**
Parking Ratio				**2.28**



PROJECT SUMMARY:

ADDRESS:	**NWC OF GATEWAY DRIVE & CANYON PARK, RIVERSIDE, 92507**
SITE AREA:	**9.13 ACRES (+/- 397,468 SF)**
ZONE:	**CANYON SPRINGS BUSINESS PARK SPECIFIC PLAN**
DENSITY:	**156 UNITS/9.13 AC= 17.1 DU/AC**
TOTAL UNITS:	**156**
TOTAL BUILDINGS:	**78 DUPLEXES + 5 COMMON AREA BUILDINGS**
PROPOSED MAX HEIGHT:	**29'-9"**
NO OF STORY:	**2-STORY @ DUPLEXES**
	1-STORY AT COMMON BUILDINGS

0 50' 200'
25' 100'

INDEPENDENCE AT CANYON SPRINGS

RIVERSIDE, CA

LS BTR DEVELOPMENT, LLC
1156 N. MOUNTAIN AVENUE, UPLAND CA 91786
PHONE: (909) 985-0971

LEWIS GROUP OF COMPANIES

ANGELENO ASSOCIATES, INC.
147 E. CITY PLACE DR. SANTA ANA CA 92705
PHONE: (714) 285-1888

SITE PLAN

A.1.0

08.07.25
JOB: 2305

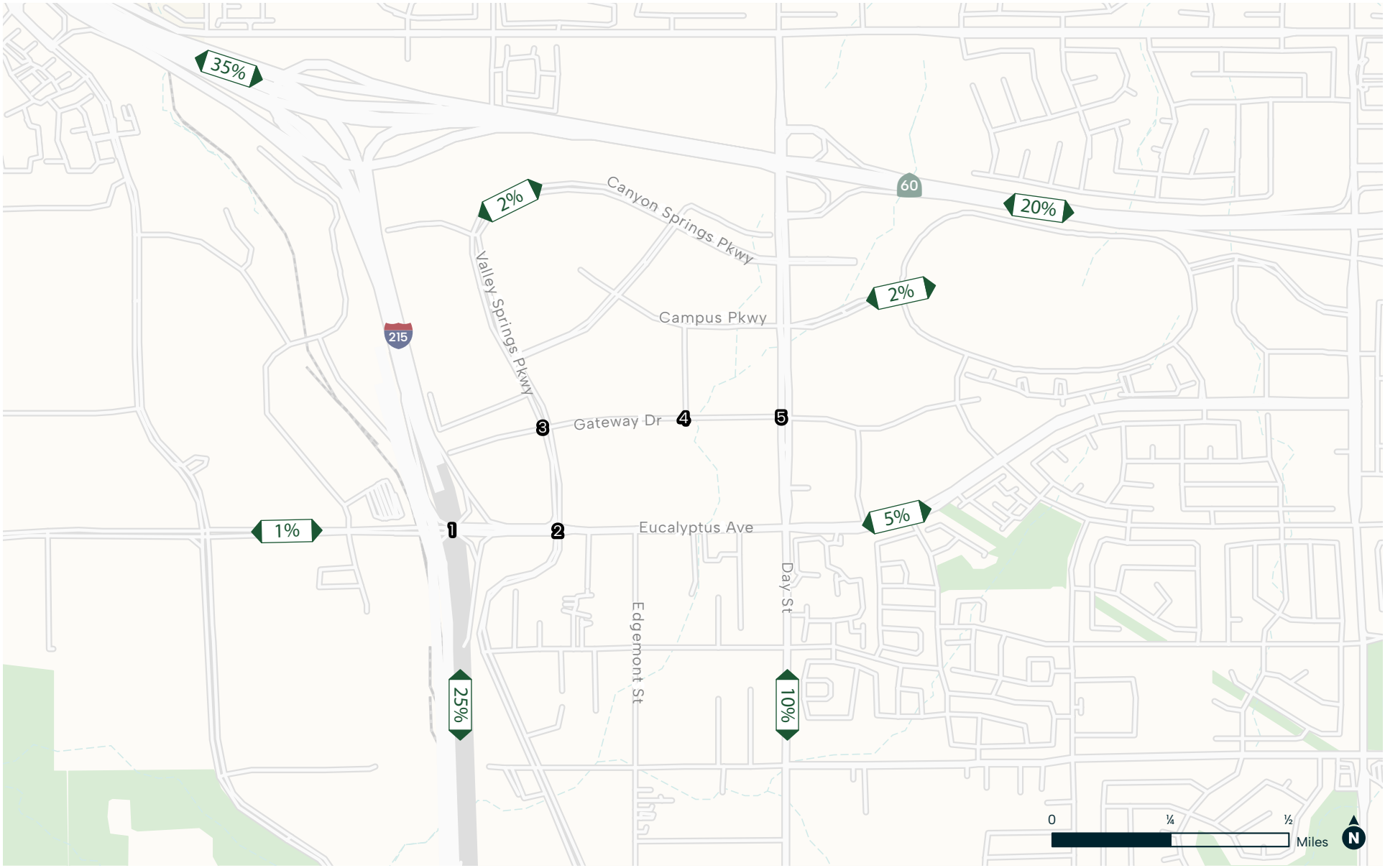


FIGURE 2

Project Trip Distribution

Fehr & Peers

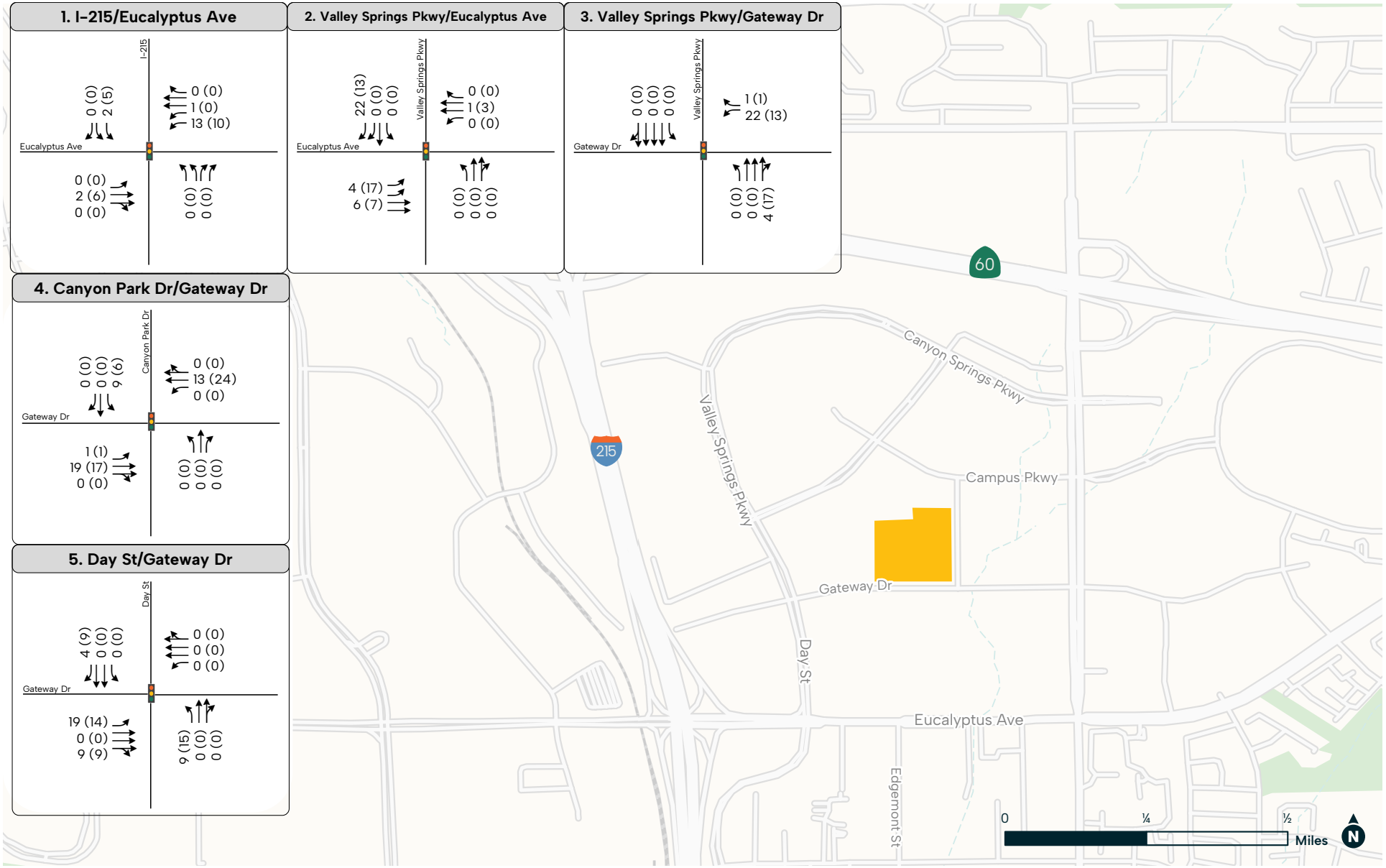


FIGURE 3

Project Trip Assignment

Fehr & Peers

Appendix B: VMT Estimation Output

Analysis

Project Name: Independence at Canyon Springs

Location: Riverside

Analysis Year: 2018

Project Land Use & Intensities:

Land Use	Quantity	Units	Per Capita/Employee VMT	VMT With Mitigation	Total VMT	Threshold	Significant Impact
215	156	Dwelling Unit(s)	14.3	14.3	7,250.2	16.2	No
				Totals	7,250.2		

Total Emission Estimates:

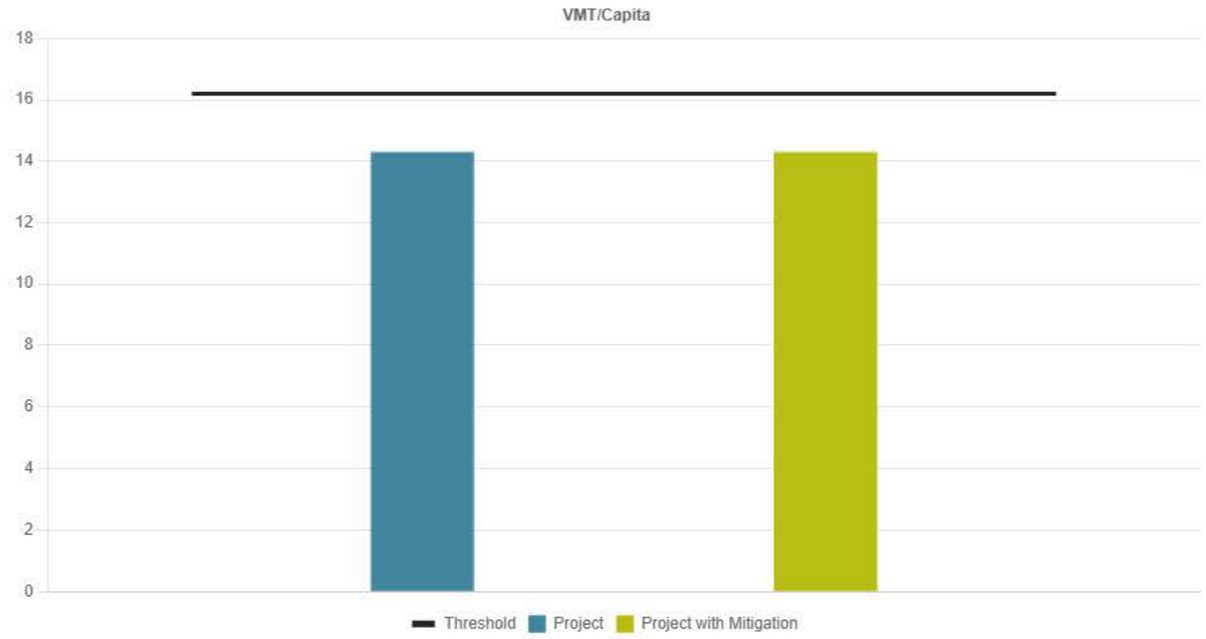
For planning level only, not for use in CEQA air quality analysis.

Pollutant	Mobile	Mitigation	With Mitigation	Non Mobile	Total
CO (lb/day)	0.00	0.00	0.00	0.00	0.00
ROG (lb/day)	0.00	0.00	0.00	0.00	0.00
NOX (lb/day)	0.00	0.00	0.00	0.00	0.00
SOX (lb/day)	0.00	0.00	0.00	0.00	0.00
PM2.5 (lb/day)	0.00	0.00	0.00	0.00	0.00
PM10 (lb/day)	0.00	0.00	0.00	0.00	0.00
CO_2 (mt/year)	0.00	0.00	0.00	0.00	0.00

Project does not need to be mitigated and can be presumed to be less than significant.

← Back | Print Results | → Mitigate VMT

ITE 215



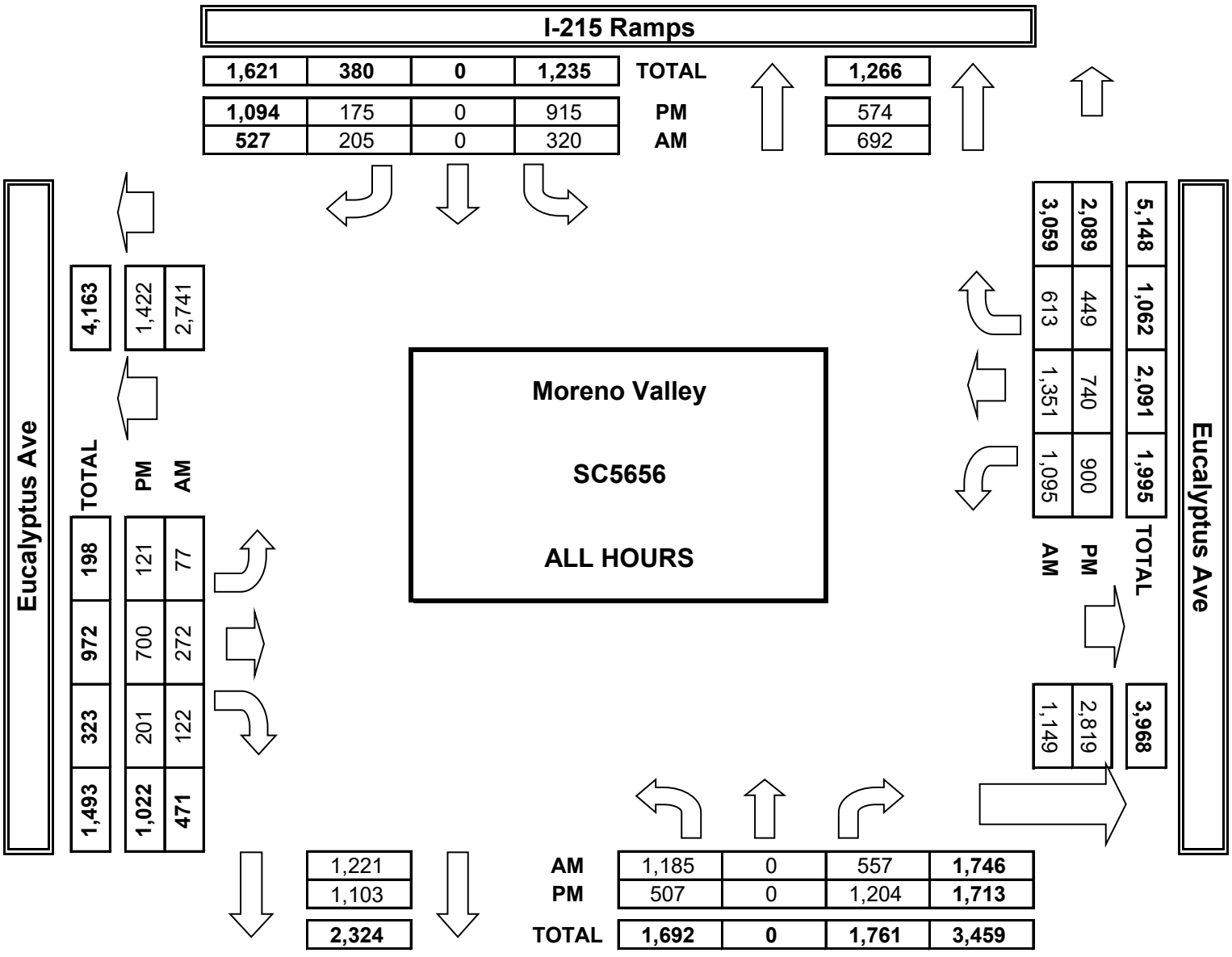
Regional Average (VMT/Capita): 16.2 Threshold: 16.2

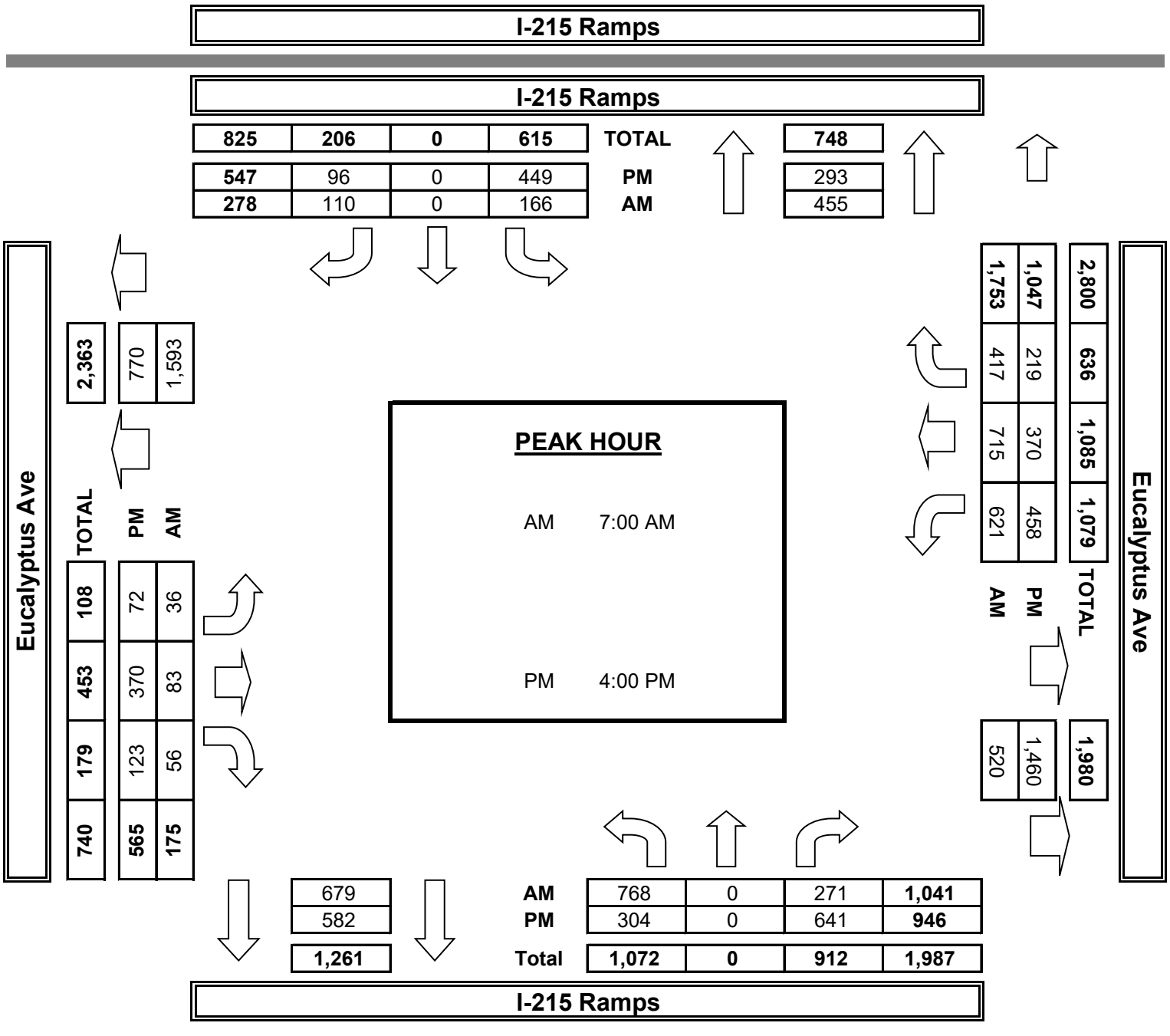
Metric	Project	Mitigation	With Mitigation
VMT/Capita	14.3	0.0	14.3
Daily Trips	1,123	0	0

Appendix C: Traffic Counts

AimTD LLC

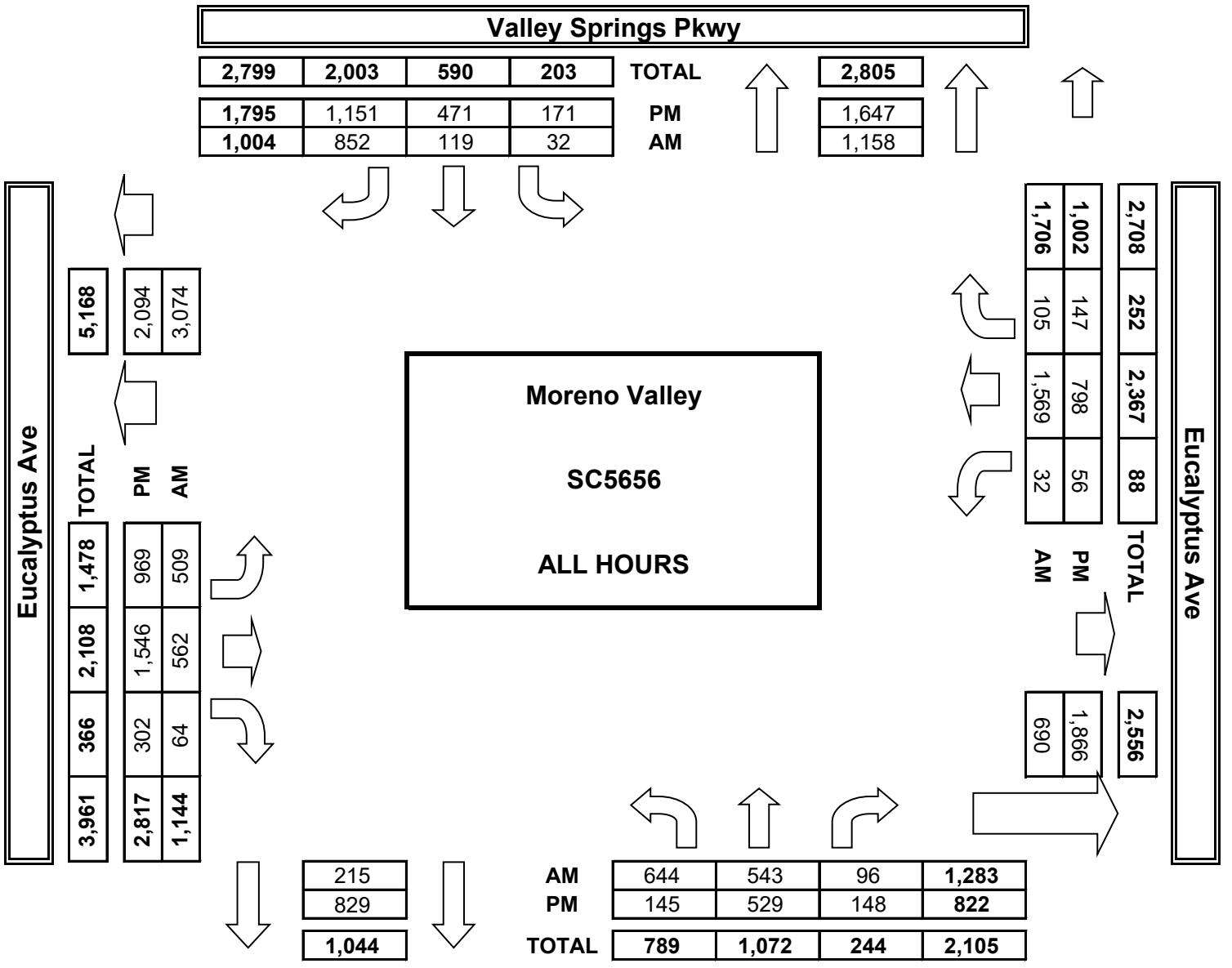
TURNING MOVEMENT COUNTS

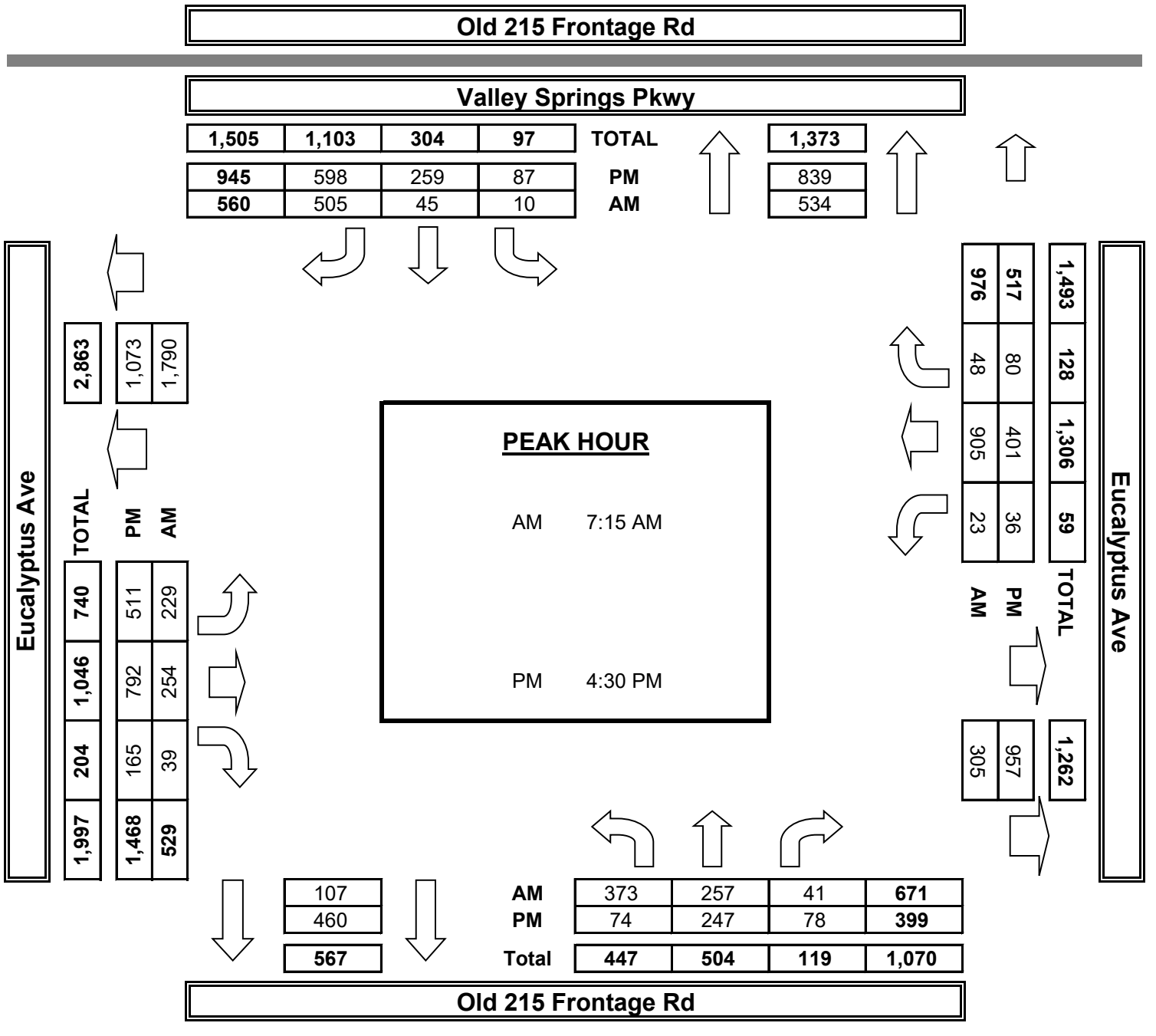




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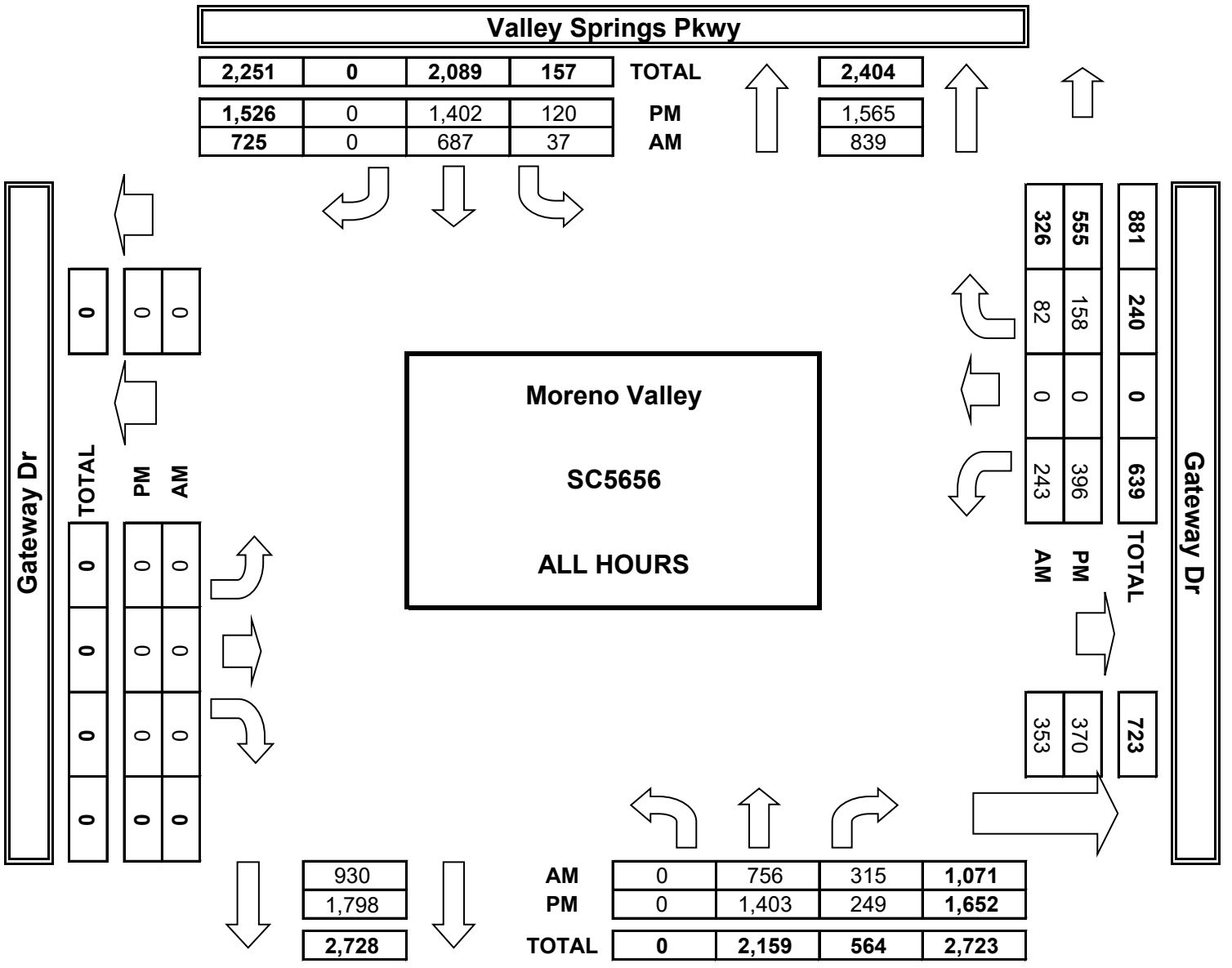
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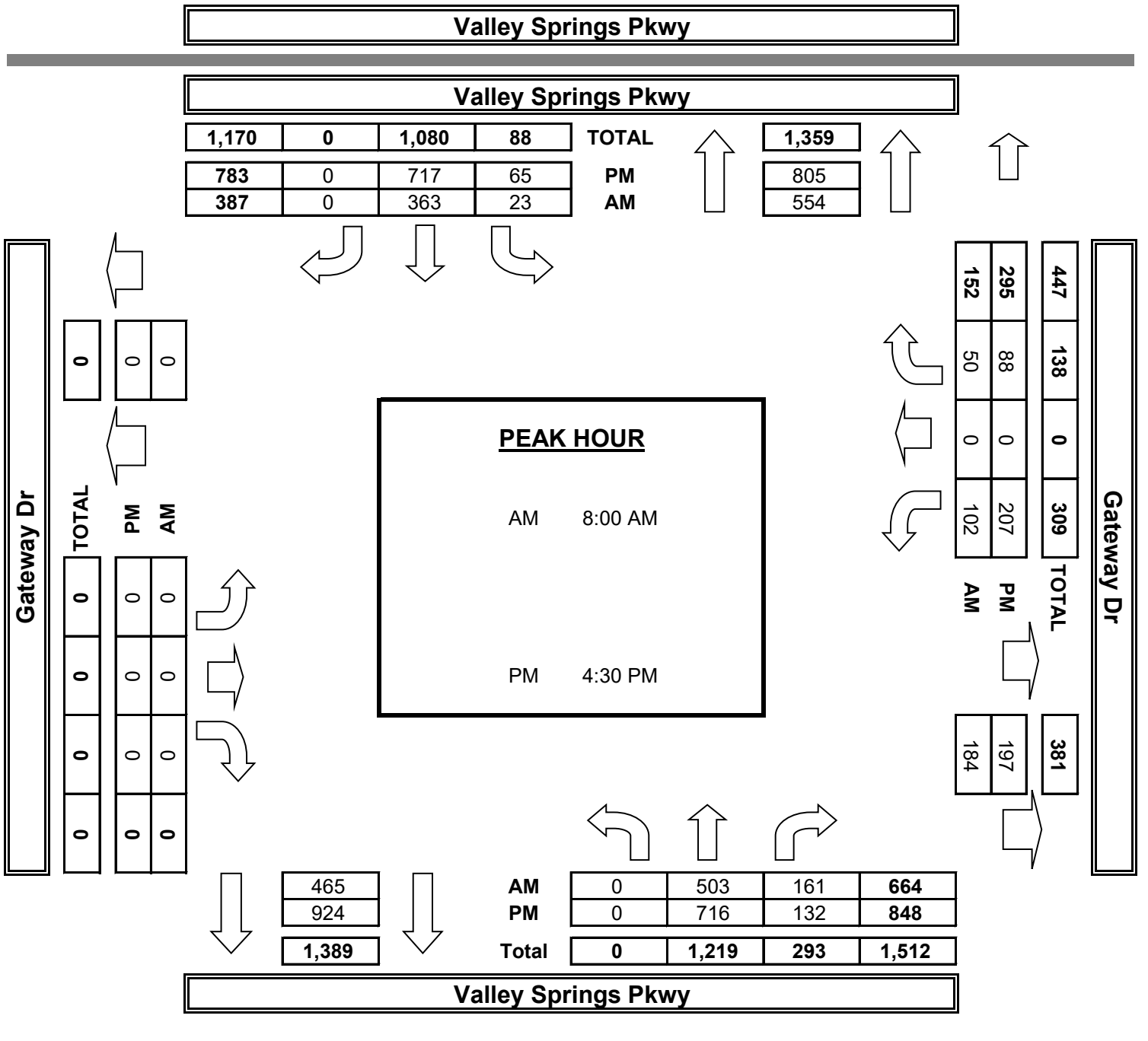




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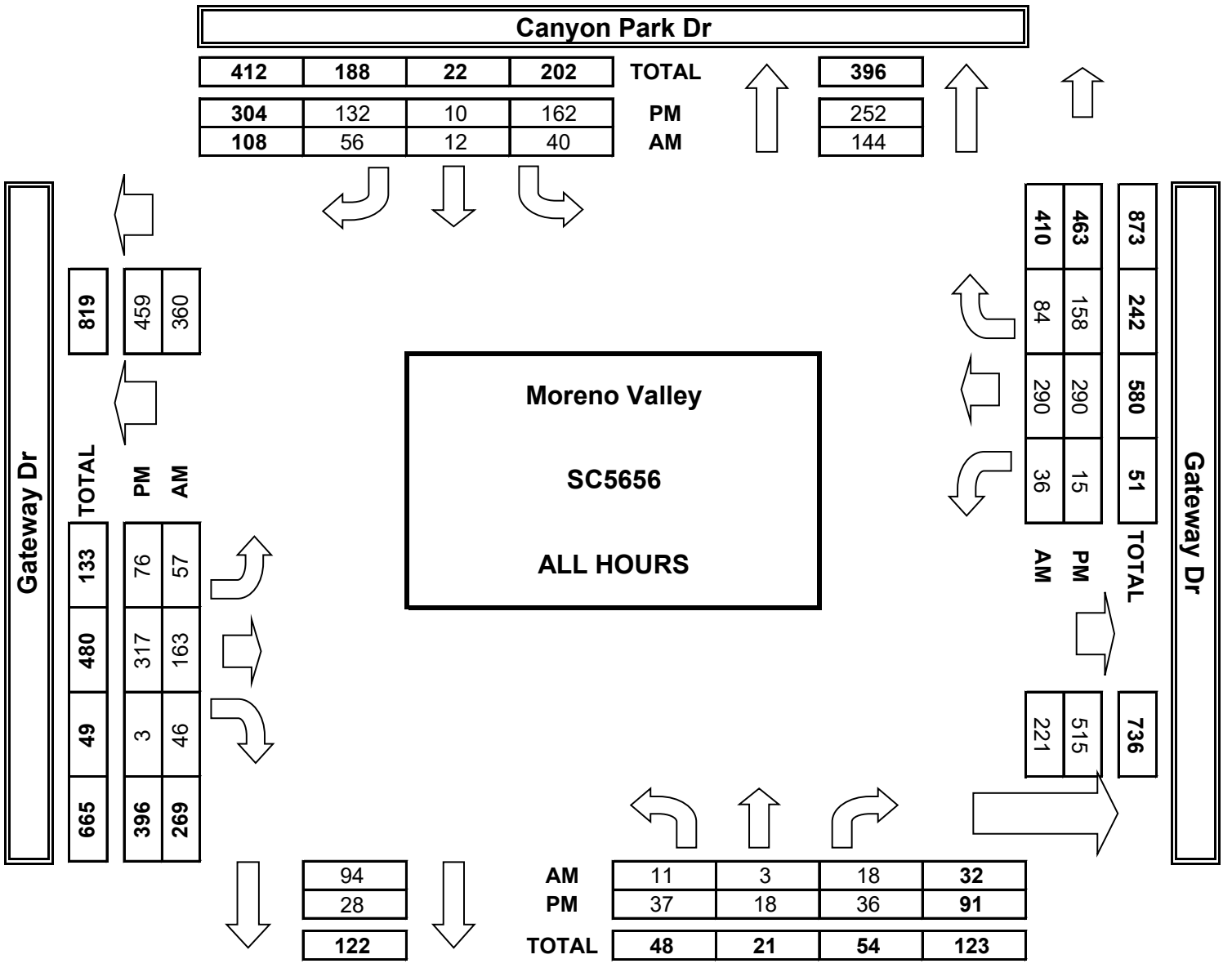
TURNING MOVEMENT COUNTS

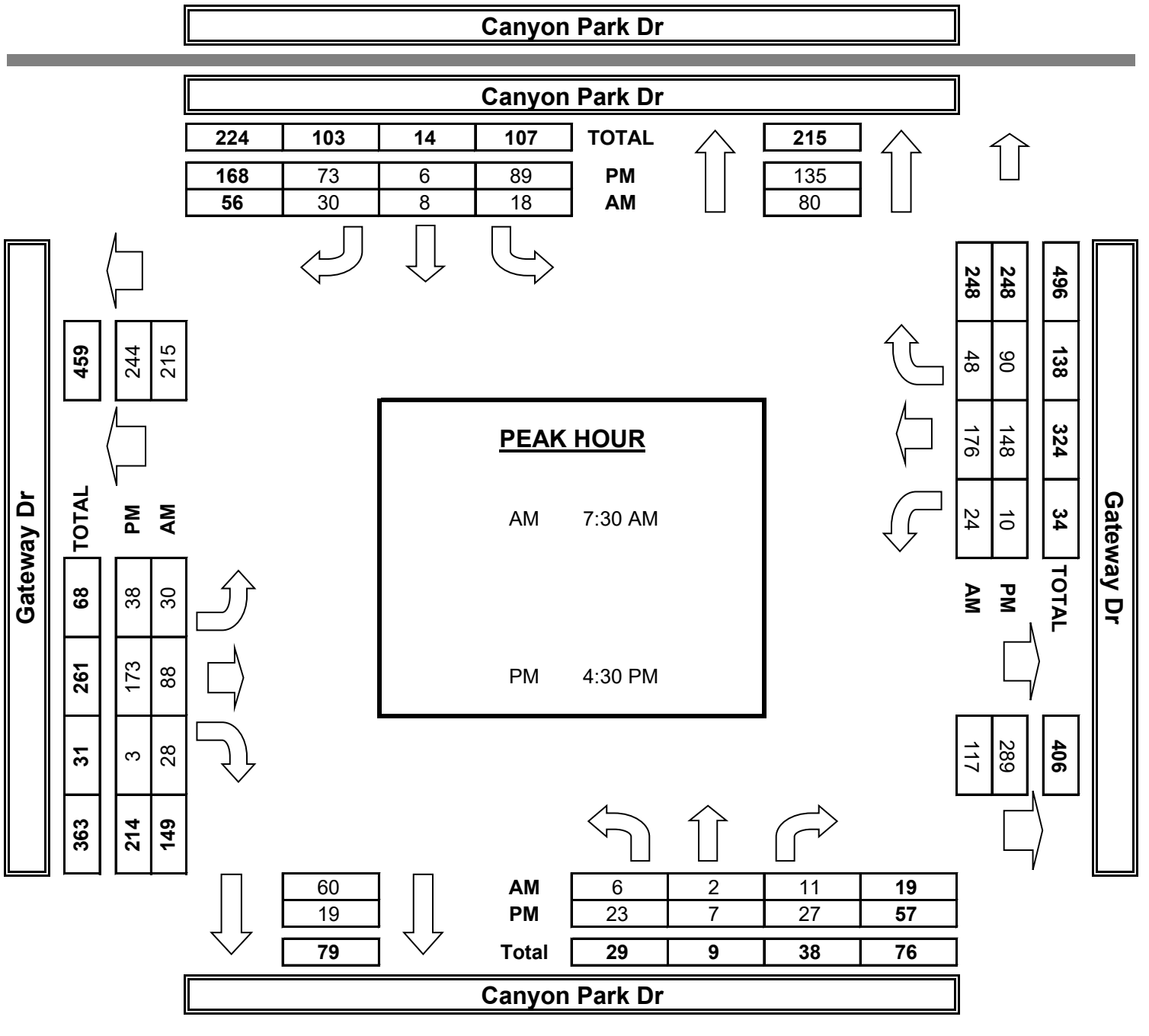




AimTD LLC

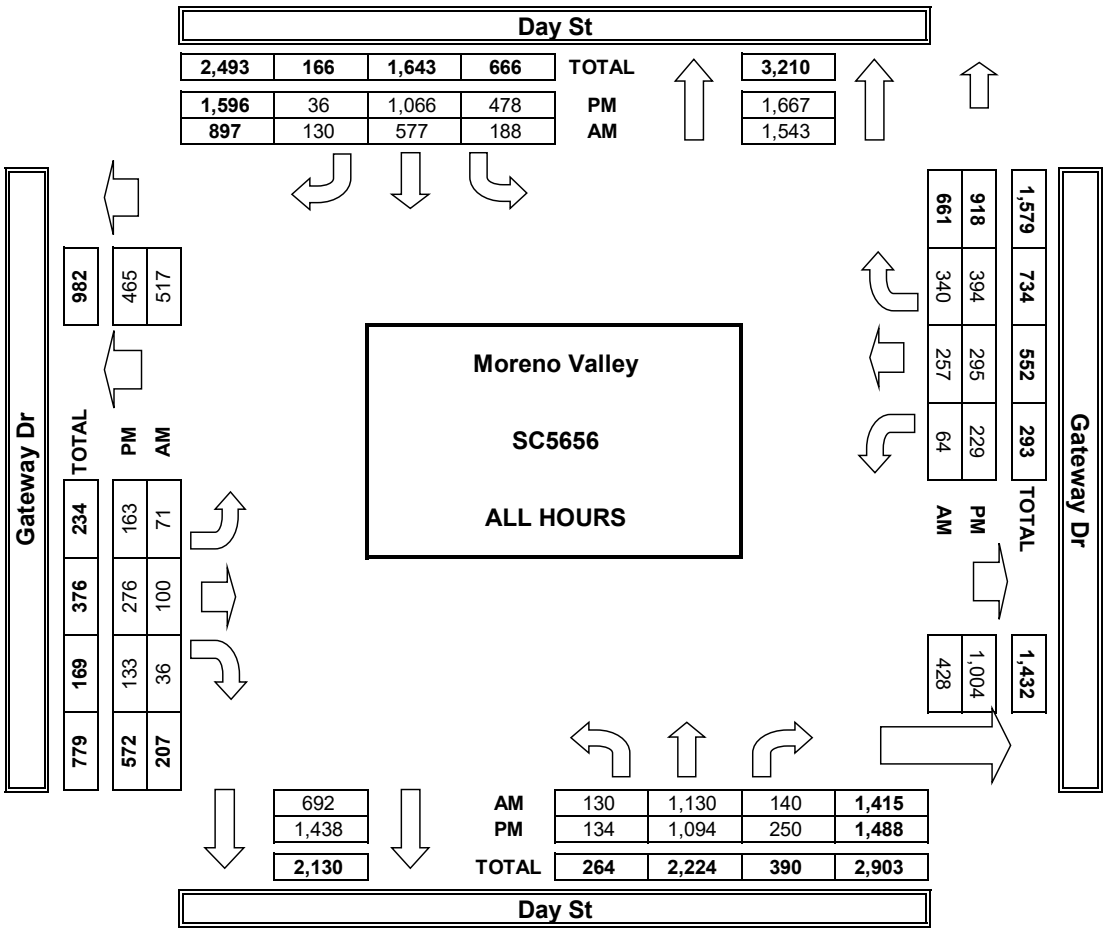
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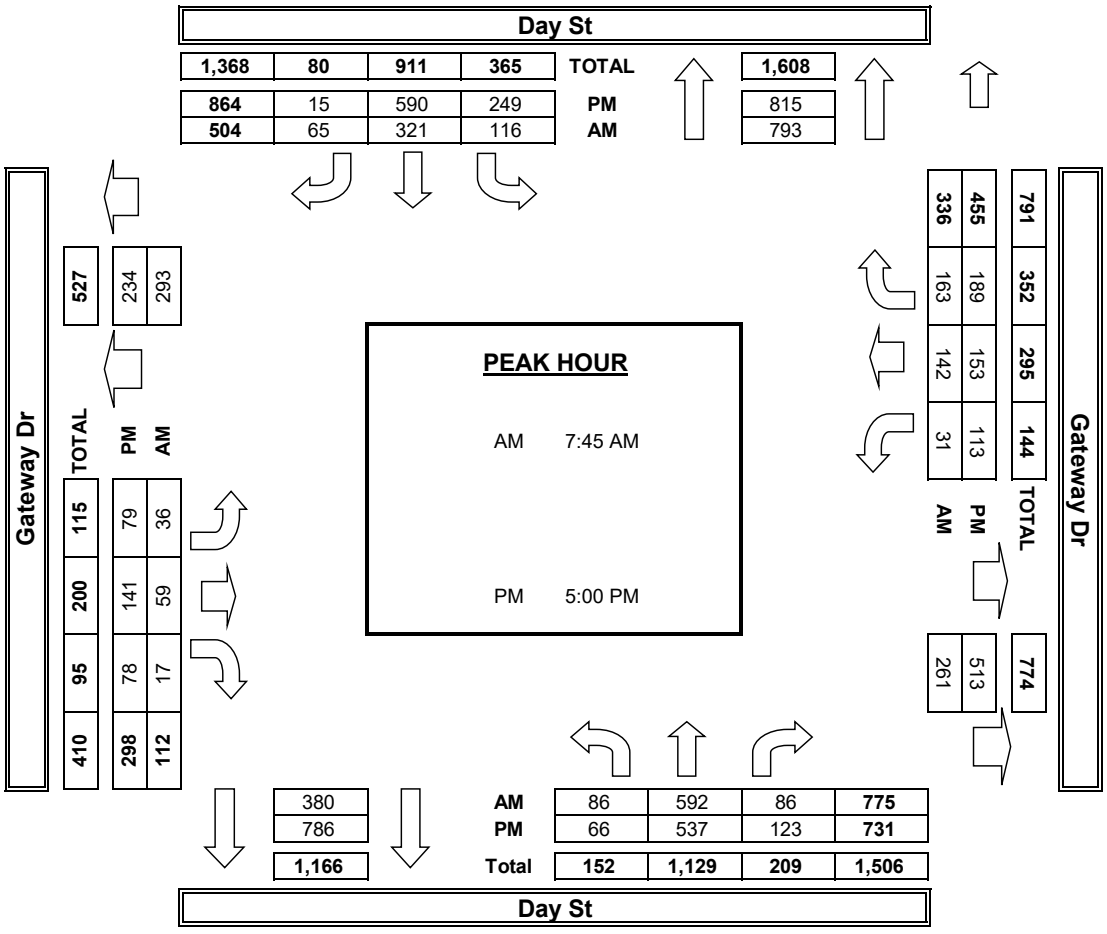




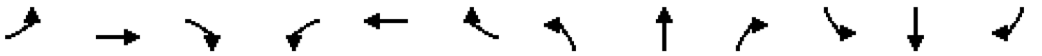
AimTD LLC

TURNING MOVEMENT COUNTS





Appendix D: Intersection LOS Worksheets



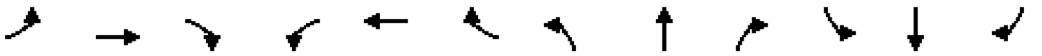
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	370	123	458	370	219	304	0	641	449	0	96
Future Volume (veh/h)	72	370	123	458	370	219	304	0	641	449	0	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	0	1856	1856	0	1856
Adj Flow Rate, veh/h	77	394	0	487	394	0	323	0	532	478	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	0	3	3	0	3
Cap, veh/h	174	1371		572	1612		566	0	0	566	0	
Arrive On Green	0.10	0.39	0.00	0.17	0.46	0.00	0.17	0.00	0.00	0.17	0.00	0.00
Sat Flow, veh/h	1767	3618	0	3428	3526	1572	3428	323		3428	478	
Grp Volume(v), veh/h	77	394	0	487	394	0	323	43.2		478	49.7	
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1714	1763	1572	1714	D		1714	D	
Q Serve(g_s), s	4.5	8.5	0.0	15.2	7.5	0.0	9.6			14.9		
Cycle Q Clear(g_c), s	4.5	8.5	0.0	15.2	7.5	0.0	9.6			14.9		
Prop In Lane	1.00		0.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	174	1371		572	1612		566			566		
V/C Ratio(X)	0.44	0.29		0.85	0.24		0.57			0.84		
Avail Cap(c_a), veh/h	406	1371		789	1612		841			841		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.90	0.90	0.00	1.00			1.00		
Uniform Delay (d), s/veh	46.7	23.1	0.0	44.5	18.2	0.0	42.3			44.6		
Incr Delay (d2), s/veh	1.7	0.5	0.0	6.0	0.3	0.0	0.9			5.2		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	2.1	3.6	0.0	6.8	3.1	0.0	4.0			6.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.5	23.6	0.0	50.5	18.6	0.0	43.2			49.7		
LnGrp LOS	D	C		D	B		D			D		
Approach Vol, veh/h		471			881							
Approach Delay, s/veh		27.7			36.2							
Approach LOS		C			D							

Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	25.1	54.8	30.2		17.6	62.3	30.2					
Change Period (Y+Rc), s	6.7	12.0	12.0		6.7	12.0	12.0					
Max Green Setting (Gmax), s	25.3	27.0	27.0		25.3	27.0	27.0					
Max Q Clear Time (g_c+I1), s	17.2	10.5	11.6		6.5	9.5	16.9					
Green Ext Time (p_c), s	1.2	2.2	1.0		0.1	2.3	1.3					

Intersection Summary	
HCM 7th Control Delay, s/veh	38.4
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	511	792	165	36	401	80	74	247	78	87	259	598
Future Volume (veh/h)	511	792	165	36	401	80	74	247	78	87	259	598
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	538	834	89	38	422	17	78	260	61	92	273	269
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	671	1317	585	67	762	338	103	558	129	120	383	1112
Arrive On Green	0.20	0.37	0.37	0.04	0.22	0.22	0.06	0.20	0.20	0.07	0.21	0.21
Sat Flow, veh/h	3428	3526	1566	1767	3526	1562	1767	2841	654	1767	1856	2768
Grp Volume(v), veh/h	538	834	89	38	422	17	78	159	162	92	273	269
Grp Sat Flow(s),veh/h/ln	1714	1763	1566	1767	1763	1562	1767	1763	1732	1767	1856	1384
Q Serve(g_s), s	9.8	12.6	2.5	1.4	6.9	0.6	2.8	5.2	5.4	3.3	8.9	4.2
Cycle Q Clear(g_c), s	9.8	12.6	2.5	1.4	6.9	0.6	2.8	5.2	5.4	3.3	8.9	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	671	1317	585	67	762	338	103	347	341	120	383	1112
V/C Ratio(X)	0.80	0.63	0.15	0.56	0.55	0.05	0.76	0.46	0.47	0.77	0.71	0.24
Avail Cap(c_a), veh/h	1579	2165	962	814	2165	959	814	812	797	814	854	1816
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	16.7	13.5	30.8	22.7	20.2	30.2	23.1	23.2	29.9	24.1	12.9
Incr Delay (d2), s/veh	0.9	0.5	0.1	2.7	0.6	0.1	4.3	1.0	1.0	3.9	2.5	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	4.6	0.8	0.6	2.7	0.2	1.3	2.1	2.1	1.5	3.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.9	17.2	13.7	33.5	23.4	20.3	34.5	24.1	24.2	33.7	26.5	13.0
LnGrp LOS	C	B	B	C	C	C	C	C	C	C	C	B
Approach Vol, veh/h		1461			477			399			634	
Approach Delay, s/veh		20.2			24.1			26.2			21.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	29.7	8.3	19.6	17.7	19.5	8.9	19.0
Change Period (Y+Rc), s	5.0	5.4	4.5	6.2	5.0	5.4	4.5	6.2
Max Green Setting (Gmax), s	30.0	40.0	30.0	30.0	30.0	40.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	3.4	14.6	4.8	10.9	11.8	8.9	5.3	7.4
Green Ext Time (p_c), s	0.0	6.5	0.1	2.5	1.0	2.9	0.1	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	22.0
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



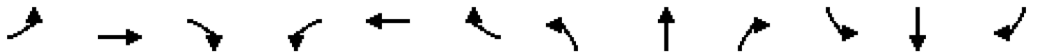
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	207	88	716	132	65	717
Future Volume (veh/h)	207	88	716	132	65	717
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	216	23	746	112	68	747
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	303	270	1642	244	120	2825
Arrive On Green	0.17	0.17	0.37	0.37	0.07	0.56
Sat Flow, veh/h	1767	1572	4613	662	1767	5233
Grp Volume(v), veh/h	216	23	565	293	68	747
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1731	1767	1689
Q Serve(g_s), s	4.3	0.5	4.7	4.8	1.4	2.9
Cycle Q Clear(g_c), s	4.3	0.5	4.7	4.8	1.4	2.9
Prop In Lane	1.00	1.00		0.38	1.00	
Lane Grp Cap(c), veh/h	303	270	1247	639	120	2825
V/C Ratio(X)	0.71	0.09	0.45	0.46	0.57	0.26
Avail Cap(c_a), veh/h	1611	1433	4527	2321	948	4075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.6	13.0	8.9	8.9	16.9	4.3
Incr Delay (d2), s/veh	3.1	0.1	0.3	0.5	1.6	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.1	1.2	1.3	0.5	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	17.7	13.1	9.2	9.4	18.4	4.3
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	239		858			815
Approach Delay, s/veh	17.2		9.3			5.5
Approach LOS	B		A			A

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	11.4	7.0	18.9		25.9
Change Period (Y+Rc), s	5.0	4.5	5.1		5.1
Max Green Setting (Gmax), s	34.0	20.0	50.0		30.0
Max Q Clear Time (g_c+I1), s	6.3	3.4	6.8		4.9
Green Ext Time (p_c), s	0.7	0.1	6.5		5.4

Intersection Summary	
HCM 7th Control Delay, s/veh	8.7
HCM 7th LOS	A

Notes

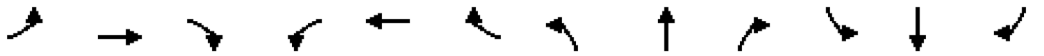
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	173	3	10	148	90	23	7	27	89	6	73
Future Volume (veh/h)	38	173	3	10	148	90	23	7	27	89	6	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	192	2	11	164	32	26	8	0	99	7	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	62	1144	12	20	873	167	43	386	327	128	475	401
Arrive On Green	0.04	0.32	0.32	0.01	0.30	0.30	0.02	0.21	0.00	0.07	0.26	0.26
Sat Flow, veh/h	1767	3574	37	1767	2949	563	1767	1856	1572	1767	1856	1564
Grp Volume(v), veh/h	42	95	99	11	97	99	26	8	0	99	7	12
Grp Sat Flow(s),veh/h/ln	1767	1763	1849	1767	1763	1749	1767	1856	1572	1767	1856	1564
Q Serve(g_s), s	1.2	2.0	2.0	0.3	2.1	2.2	0.8	0.2	0.0	2.8	0.1	0.3
Cycle Q Clear(g_c), s	1.2	2.0	2.0	0.3	2.1	2.2	0.8	0.2	0.0	2.8	0.1	0.3
Prop In Lane	1.00		0.02	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	564	591	20	522	518	43	386	327	128	475	401
V/C Ratio(X)	0.68	0.17	0.17	0.55	0.18	0.19	0.61	0.02	0.00	0.78	0.01	0.03
Avail Cap(c_a), veh/h	515	1541	1615	515	1541	1528	515	1622	1374	515	1622	1367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	12.6	12.6	25.3	13.5	13.5	24.9	16.2	0.0	23.5	14.3	14.4
Incr Delay (d2), s/veh	4.7	0.3	0.3	8.5	0.4	0.4	5.1	0.0	0.0	3.8	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.7	0.7	0.2	0.8	0.8	0.4	0.1	0.0	1.2	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.3	12.9	12.9	33.8	13.9	13.9	30.0	16.3	0.0	27.2	14.3	14.4
LnGrp LOS	C	B	B	C	B	B	C	B		C	B	B
Approach Vol, veh/h		236			207			34			118	
Approach Delay, s/veh		15.8			14.9			26.8			25.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	22.5	7.7	16.7	5.8	21.3	5.2	19.2
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	15.0	45.0	15.0	45.0	15.0	45.0	15.0	45.0
Max Q Clear Time (g_c+I1), s	2.3	4.0	4.8	2.2	3.2	4.2	2.8	2.3
Green Ext Time (p_c), s	0.0	2.2	0.1	0.0	0.0	2.3	0.0	0.1

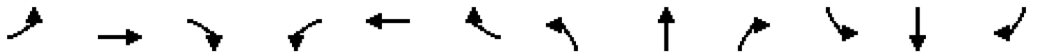
Intersection Summary	
HCM 7th Control Delay, s/veh	18.0
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	141	78	113	153	189	66	537	123	249	590	15
Future Volume (veh/h)	79	141	78	113	153	189	66	537	123	249	590	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	81	144	16	115	156	35	67	548	98	254	602	13
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	121	468	51	149	466	102	108	1140	200	397	1622	35
Arrive On Green	0.07	0.15	0.15	0.08	0.16	0.16	0.06	0.26	0.26	0.12	0.32	0.32
Sat Flow, veh/h	1767	3200	351	1767	2871	628	1767	4331	760	3428	5102	110
Grp Volume(v), veh/h	81	78	82	115	94	97	67	425	221	254	398	217
Grp Sat Flow(s),veh/h/ln	1767	1763	1788	1767	1763	1736	1767	1689	1714	1714	1689	1835
Q Serve(g_s), s	2.2	1.9	2.0	3.1	2.3	2.4	1.8	5.2	5.3	3.4	4.4	4.5
Cycle Q Clear(g_c), s	2.2	1.9	2.0	3.1	2.3	2.4	1.8	5.2	5.3	3.4	4.4	4.5
Prop In Lane	1.00		0.20	1.00		0.36	1.00		0.44	1.00		0.06
Lane Grp Cap(c), veh/h	121	258	261	149	286	282	108	889	451	397	1074	583
V/C Ratio(X)	0.67	0.30	0.31	0.77	0.33	0.34	0.62	0.48	0.49	0.64	0.37	0.37
Avail Cap(c_a), veh/h	726	1448	1469	726	1448	1426	726	2774	1408	1408	2774	1507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	18.6	18.6	21.8	18.0	18.1	22.3	15.1	15.2	20.6	12.8	12.8
Incr Delay (d2), s/veh	2.4	0.7	0.7	3.1	0.7	0.7	2.1	0.4	0.8	0.6	0.2	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.7	0.8	1.3	0.9	0.9	0.7	1.7	1.8	1.2	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.5	19.2	19.3	25.0	18.7	18.8	24.5	15.5	16.0	21.2	13.1	13.2
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		241			306			713			869	
Approach Delay, s/veh		21.0			21.1			16.5			15.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	18.2	8.1	11.7	8.0	20.9	7.3	12.5
Change Period (Y+Rc), s	5.0	5.4	4.0	4.6	5.0	5.4	4.0	4.6
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	5.4	7.3	5.1	4.0	3.8	6.5	4.2	4.4
Green Ext Time (p_c), s	0.4	4.3	0.1	0.9	0.1	4.0	0.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	17.3
HCM 7th LOS	B



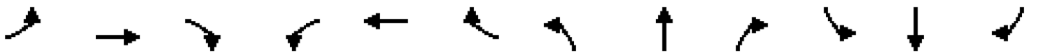
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	83	56	621	715	417	768	0	271	166	0	110
Future Volume (veh/h)	36	83	56	621	715	417	768	0	271	166	0	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	0	1856	1856	0	1856
Adj Flow Rate, veh/h	38	87	0	654	753	0	808	0	125	175	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	0	3	3	0	3
Cap, veh/h	127	1018		733	1518		829	0	0	829	0	
Arrive On Green	0.07	0.29	0.00	0.21	0.43	0.00	0.24	0.00	0.00	0.24	0.00	0.00
Sat Flow, veh/h	1767	3618	0	3428	3526	1572	3428	808		3428	175	
Grp Volume(v), veh/h	38	87	0	654	753	0	808	70.4		175	36.5	
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1714	1763	1572	1714	E		1714	D	
Q Serve(g_s), s	2.4	2.2	0.0	22.2	18.6	0.0	28.1			4.9		
Cycle Q Clear(g_c), s	2.4	2.2	0.0	22.2	18.6	0.0	28.1			4.9		
Prop In Lane	1.00		0.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	127	1018		733	1518		829			829		
V/C Ratio(X)	0.30	0.09		0.89	0.50		0.98			0.21		
Avail Cap(c_a), veh/h	446	1018		866	1518		829			829		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.52	0.52	0.00	1.00			1.00		
Uniform Delay (d), s/veh	52.8	31.1	0.0	45.8	24.7	0.0	45.1			36.4		
Incr Delay (d2), s/veh	1.3	0.2	0.0	5.8	0.6	0.0	25.2			0.1		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	1.1	0.9	0.0	9.9	7.7	0.0	14.5			2.0		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.1	31.3	0.0	51.7	25.3	0.0	70.4			36.5		
LnGrp LOS	D	C		D	C		E			D		
Approach Vol, veh/h		125			1407							
Approach Delay, s/veh		38.2			37.6							
Approach LOS		D			D							

Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	32.3	46.7	41.0		15.3	63.7	41.0					
Change Period (Y+Rc), s	6.7	12.0	12.0		6.7	12.0	12.0					
Max Green Setting (Gmax), s	30.3	30.0	29.0		30.3	30.0	29.0					
Max Q Clear Time (g_c+I1), s	24.2	4.2	30.1		4.4	20.6	6.9					
Green Ext Time (p_c), s	1.4	0.4	0.0		0.1	3.4	0.5					

Intersection Summary	
HCM 7th Control Delay, s/veh	48.1
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	229	254	39	23	905	48	373	257	41	10	45	505
Future Volume (veh/h)	229	254	39	23	905	48	373	257	41	10	45	505
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	246	273	18	25	973	17	401	276	36	11	48	487
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	310	1322	588	42	1087	482	425	1295	167	23	343	762
Arrive On Green	0.09	0.38	0.38	0.02	0.31	0.31	0.24	0.41	0.41	0.01	0.18	0.18
Sat Flow, veh/h	3428	3526	1566	1767	3526	1565	1767	3139	405	1767	1856	2768
Grp Volume(v), veh/h	246	273	18	25	973	17	401	154	158	11	48	487
Grp Sat Flow(s),veh/h/ln	1714	1763	1566	1767	1763	1565	1767	1763	1781	1767	1856	1384
Q Serve(g_s), s	8.4	6.3	0.9	1.7	31.6	0.9	26.7	6.7	6.9	0.7	2.6	18.6
Cycle Q Clear(g_c), s	8.4	6.3	0.9	1.7	31.6	0.9	26.7	6.7	6.9	0.7	2.6	18.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	310	1322	588	42	1087	482	425	727	735	23	343	762
V/C Ratio(X)	0.79	0.21	0.03	0.60	0.90	0.04	0.94	0.21	0.22	0.49	0.14	0.64
Avail Cap(c_a), veh/h	857	1322	588	442	1175	522	442	727	735	442	464	942
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	25.4	23.7	58.0	39.6	29.0	44.8	22.7	22.7	58.8	40.9	38.2
Incr Delay (d2), s/veh	1.8	0.1	0.0	5.1	8.7	0.0	28.0	0.1	0.1	5.9	0.2	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.6	0.3	0.8	14.7	0.3	14.8	2.8	2.9	0.4	1.2	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.2	25.5	23.7	63.1	48.4	29.0	72.7	22.8	22.9	64.7	41.1	39.2
LnGrp LOS	E	C	C	E	D	C	E	C	C	E	D	D
Approach Vol, veh/h		537			1015			713			546	
Approach Delay, s/veh		39.0			48.4			50.9			39.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	50.4	33.4	28.4	15.8	42.4	6.0	55.7
Change Period (Y+Rc), s	5.0	5.4	4.5	6.2	5.0	5.4	4.5	6.2
Max Green Setting (Gmax), s	30.0	40.0	30.0	30.0	30.0	40.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	3.7	8.3	28.7	20.6	10.4	33.6	2.7	8.9
Green Ext Time (p_c), s	0.0	1.8	0.1	1.6	0.4	3.4	0.0	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	45.6
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



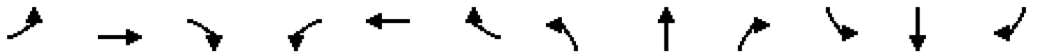
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	102	50	503	161	23	363
Future Volume (veh/h)	102	50	503	161	23	363
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	110	8	541	124	25	390
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	187	166	1484	332	56	2765
Arrive On Green	0.11	0.11	0.36	0.36	0.03	0.55
Sat Flow, veh/h	1767	1572	4300	926	1767	5233
Grp Volume(v), veh/h	110	8	440	225	25	390
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1681	1767	1689
Q Serve(g_s), s	1.7	0.1	2.8	2.9	0.4	1.1
Cycle Q Clear(g_c), s	1.7	0.1	2.8	2.9	0.4	1.1
Prop In Lane	1.00	1.00		0.55	1.00	
Lane Grp Cap(c), veh/h	187	166	1212	604	56	2765
V/C Ratio(X)	0.59	0.05	0.36	0.37	0.45	0.14
Avail Cap(c_a), veh/h	2073	1845	5826	2900	1219	5243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	11.6	6.8	6.9	13.8	3.2
Incr Delay (d2), s/veh	2.9	0.1	0.2	0.4	2.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.5	0.6	0.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.3	11.8	7.0	7.3	15.9	3.3
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	118		665			415
Approach Delay, s/veh	15.0		7.1			4.0
Approach LOS	B		A			A

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		8.1	5.4	15.5		20.9
Change Period (Y+Rc), s		5.0	4.5	5.1		5.1
Max Green Setting (Gmax), s		34.0	20.0	50.0		30.0
Max Q Clear Time (g_c+I1), s		3.7	2.4	4.9		3.1
Green Ext Time (p_c), s		0.3	0.0	4.8		2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	6.8
HCM 7th LOS	A

Notes

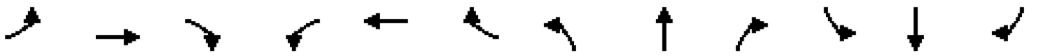
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	88	28	24	176	48	6	2	11	18	8	30
Future Volume (veh/h)	30	88	28	24	176	48	6	2	11	18	8	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	36	106	15	29	212	42	7	2	0	22	10	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	57	1117	155	48	1041	202	13	233	198	38	259	220
Arrive On Green	0.03	0.36	0.36	0.03	0.35	0.35	0.01	0.13	0.00	0.02	0.14	0.00
Sat Flow, veh/h	1767	3106	431	1767	2939	571	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	36	59	62	29	125	129	7	2	0	22	10	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1774	1767	1763	1748	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	0.9	1.0	1.0	0.7	2.1	2.2	0.2	0.0	0.0	0.5	0.2	0.0
Cycle Q Clear(g_c), s	0.9	1.0	1.0	0.7	2.1	2.2	0.2	0.0	0.0	0.5	0.2	0.0
Prop In Lane	1.00		0.24	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	634	638	48	625	619	13	233	198	38	259	220
V/C Ratio(X)	0.63	0.09	0.10	0.60	0.20	0.21	0.53	0.01	0.00	0.58	0.04	0.00
Avail Cap(c_a), veh/h	617	1848	1860	617	1848	1832	617	1945	1648	617	1945	1648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.5	9.1	9.1	20.6	9.6	9.7	21.2	16.4	0.0	20.8	16.0	0.0
Incr Delay (d2), s/veh	4.1	0.1	0.1	4.4	0.3	0.4	11.7	0.0	0.0	5.1	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.3	0.3	0.7	0.7	0.1	0.0	0.0	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.6	9.2	9.3	25.1	10.0	10.0	33.0	16.5	0.0	25.9	16.1	0.0
LnGrp LOS	C	A	A	C	A	B	C	B		C	B	
Approach Vol, veh/h		157			283			9			32	
Approach Delay, s/veh		12.8			11.5			29.3			22.8	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	21.4	4.9	11.4	5.4	21.2	4.3	12.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	15.0	45.0	15.0	45.0	15.0	45.0	15.0	45.0
Max Q Clear Time (g_c+I1), s	2.7	3.0	2.5	2.0	2.9	4.2	2.2	2.2
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	3.0	0.0	0.0

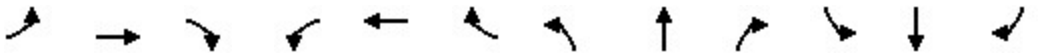
Intersection Summary	
HCM 7th Control Delay, s/veh	13.0
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	59	17	31	142	163	86	592	86	116	321	65
Future Volume (veh/h)	36	59	17	31	142	163	86	592	86	116	321	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	40	65	4	34	156	26	95	651	81	127	353	47
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	77	534	33	68	464	76	136	1351	166	302	1392	181
Arrive On Green	0.04	0.16	0.16	0.04	0.15	0.15	0.08	0.30	0.30	0.09	0.31	0.31
Sat Flow, veh/h	1767	3373	206	1767	3029	495	1767	4566	562	3428	4533	590
Grp Volume(v), veh/h	40	34	35	34	89	93	95	480	252	127	261	139
Grp Sat Flow(s),veh/h/ln	1767	1763	1816	1767	1763	1761	1767	1689	1751	1714	1689	1746
Q Serve(g_s), s	1.0	0.7	0.8	0.9	2.1	2.1	2.4	5.3	5.4	1.6	2.6	2.7
Cycle Q Clear(g_c), s	1.0	0.7	0.8	0.9	2.1	2.1	2.4	5.3	5.4	1.6	2.6	2.7
Prop In Lane	1.00		0.11	1.00		0.28	1.00		0.32	1.00		0.34
Lane Grp Cap(c), veh/h	77	279	288	68	270	270	136	999	518	302	1037	536
V/C Ratio(X)	0.52	0.12	0.12	0.50	0.33	0.34	0.70	0.48	0.49	0.42	0.25	0.26
Avail Cap(c_a), veh/h	780	1556	1603	780	1556	1554	780	2981	1546	1513	2981	1541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	16.4	16.4	21.4	17.1	17.2	20.4	13.1	13.1	19.6	11.8	11.8
Incr Delay (d2), s/veh	2.0	0.2	0.2	2.1	0.7	0.8	2.4	0.4	0.7	0.3	0.1	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.3	0.3	0.4	0.8	0.8	0.9	1.6	1.7	0.6	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.2	16.6	16.6	23.5	17.8	17.9	22.8	13.5	13.8	19.9	11.9	12.1
LnGrp LOS	C	B	B	C	B	B	C	B	B	B	B	B
Approach Vol, veh/h		109			216			827			527	
Approach Delay, s/veh		19.0			18.7			14.6			13.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	18.8	5.7	11.8	8.5	19.3	6.0	11.5
Change Period (Y+Rc), s	5.0	5.4	4.0	4.6	5.0	5.4	4.0	4.6
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	3.6	7.4	2.9	2.8	4.4	4.7	3.0	4.1
Green Ext Time (p_c), s	0.2	4.9	0.0	0.3	0.1	2.5	0.0	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	15.2
HCM 7th LOS	B



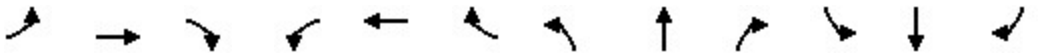
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	380	140	540	380	230	320	0	670	470	0	110
Future Volume (veh/h)	80	380	140	540	380	230	320	0	670	470	0	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	0	1856	1856	0	1856
Adj Flow Rate, veh/h	85	404	0	574	404	0	340	0	578	500	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	0	3	3	0	3
Cap, veh/h	178	1264		655	1581		588	0	0	588	0	
Arrive On Green	0.10	0.36	0.00	0.19	0.45	0.00	0.17	0.00	0.00	0.17	0.00	0.00
Sat Flow, veh/h	1767	3618	0	3428	3526	1572	3428	340		3428	500	
Grp Volume(v), veh/h	85	404	0	574	404	0	340	42.8		500	50.0	
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1714	1763	1572	1714	D		1714	D	
Q Serve(g_s), s	5.0	9.1	0.0	17.9	7.9	0.0	10.0			15.6		
Cycle Q Clear(g_c), s	5.0	9.1	0.0	17.9	7.9	0.0	10.0			15.6		
Prop In Lane	1.00		0.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	178	1264		655	1581		588			588		
V/C Ratio(X)	0.48	0.32		0.88	0.26		0.58			0.85		
Avail Cap(c_a), veh/h	406	1264		789	1581		841			841		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.86	0.86	0.00	1.00			1.00		
Uniform Delay (d), s/veh	46.7	25.6	0.0	43.2	18.9	0.0	41.9			44.2		
Incr Delay (d2), s/veh	2.0	0.7	0.0	8.4	0.3	0.0	0.9			5.8		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	2.3	3.9	0.0	8.2	3.2	0.0	4.2			6.9		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.7	26.2	0.0	51.6	19.2	0.0	42.8			50.0		
LnGrp LOS	D	C		D	B		D			D		
Approach Vol, veh/h		489			978							
Approach Delay, s/veh		30.1			38.2							
Approach LOS		C			D							

Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	27.7	51.4	30.9		17.8	61.3	30.9					
Change Period (Y+Rc), s	6.7	12.0	12.0		6.7	12.0	12.0					
Max Green Setting (Gmax), s	25.3	27.0	27.0		25.3	27.0	27.0					
Max Q Clear Time (g_c+I1), s	19.9	11.1	12.0		7.0	9.9	17.6					
Green Ext Time (p_c), s	1.1	2.2	1.0		0.2	2.3	1.3					

Intersection Summary	
HCM 7th Control Delay, s/veh	39.7
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	520	820	180	40	450	90	90	270	90	100	270	660
Future Volume (veh/h)	520	820	180	40	450	90	90	270	90	100	270	660
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	547	863	98	42	474	21	95	284	73	105	284	376
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	668	1345	597	70	797	353	123	572	144	136	394	1128
Arrive On Green	0.19	0.38	0.38	0.04	0.23	0.23	0.07	0.21	0.21	0.08	0.21	0.21
Sat Flow, veh/h	3428	3526	1566	1767	3526	1562	1767	2783	702	1767	1856	2768
Grp Volume(v), veh/h	547	863	98	42	474	21	95	178	179	105	284	376
Grp Sat Flow(s),veh/h/ln	1714	1763	1566	1767	1763	1562	1767	1763	1723	1767	1856	1384
Q Serve(g_s), s	10.9	14.3	2.9	1.7	8.6	0.8	3.8	6.3	6.6	4.1	10.1	6.6
Cycle Q Clear(g_c), s	10.9	14.3	2.9	1.7	8.6	0.8	3.8	6.3	6.6	4.1	10.1	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	668	1345	597	70	797	353	123	362	354	136	394	1128
V/C Ratio(X)	0.82	0.64	0.16	0.60	0.59	0.06	0.77	0.49	0.51	0.77	0.72	0.33
Avail Cap(c_a), veh/h	1445	1982	880	745	1982	878	745	743	726	745	782	1706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	18.0	14.5	33.6	24.6	21.6	32.5	25.0	25.1	32.2	26.0	14.5
Incr Delay (d2), s/veh	1.0	0.5	0.1	3.0	0.7	0.1	3.8	1.0	1.1	3.5	2.5	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	5.3	1.0	0.7	3.4	0.3	1.7	2.6	2.6	1.8	4.5	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.4	18.5	14.6	36.7	25.3	21.7	36.3	26.0	26.2	35.7	28.5	14.6
LnGrp LOS	C	B	B	D	C	C	D	C	C	D	C	B
Approach Vol, veh/h		1508			537			452			765	
Approach Delay, s/veh		21.9			26.1			28.3			22.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	32.5	9.5	21.3	18.9	21.5	10.0	20.8
Change Period (Y+Rc), s	5.0	5.4	4.5	6.2	5.0	5.4	4.5	6.2
Max Green Setting (Gmax), s	30.0	40.0	30.0	30.0	30.0	40.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	3.7	16.3	5.8	12.1	12.9	10.6	6.1	8.6
Green Ext Time (p_c), s	0.0	6.6	0.1	3.0	1.0	3.3	0.1	2.0

Intersection Summary	
HCM 7th Control Delay, s/veh	23.6
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

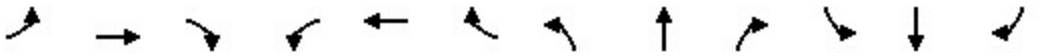


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	220	100	730	170	70	780
Future Volume (veh/h)	220	100	730	170	70	780
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	229	26	760	140	73	812
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	318	283	1618	295	124	2845
Arrive On Green	0.18	0.18	0.38	0.38	0.07	0.56
Sat Flow, veh/h	1767	1572	4467	785	1767	5233
Grp Volume(v), veh/h	229	26	595	305	73	812
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1708	1767	1689
Q Serve(g_s), s	4.8	0.5	5.2	5.3	1.6	3.3
Cycle Q Clear(g_c), s	4.8	0.5	5.2	5.3	1.6	3.3
Prop In Lane	1.00	1.00		0.46	1.00	
Lane Grp Cap(c), veh/h	318	283	1271	643	124	2845
V/C Ratio(X)	0.72	0.09	0.47	0.47	0.59	0.29
Avail Cap(c_a), veh/h	1538	1368	4322	2186	905	3889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.1	13.4	9.2	9.2	17.6	4.5
Incr Delay (d2), s/veh	3.1	0.1	0.3	0.5	1.7	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.2	1.4	1.5	0.6	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	18.2	13.5	9.5	9.8	19.3	4.5
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	255		900			885
Approach Delay, s/veh	17.7		9.6			5.7
Approach LOS	B		A			A

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		12.0	7.2	19.8		27.0
Change Period (Y+Rc), s		5.0	4.5	5.1		5.1
Max Green Setting (Gmax), s		34.0	20.0	50.0		30.0
Max Q Clear Time (g_c+I1), s		6.8	3.6	7.3		5.3
Green Ext Time (p_c), s		0.7	0.1	7.0		5.9

Intersection Summary	
HCM 7th Control Delay, s/veh	8.9
HCM 7th LOS	A

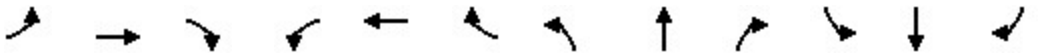
Notes
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	200	10	20	190	100	30	10	40	100	10	80
Future Volume (veh/h)	50	200	10	20	190	100	30	10	40	100	10	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	56	222	9	22	211	59	33	11	2	111	11	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	75	1068	43	37	786	214	51	392	331	144	489	412
Arrive On Green	0.04	0.31	0.31	0.02	0.29	0.29	0.03	0.21	0.21	0.08	0.26	0.26
Sat Flow, veh/h	1767	3453	139	1767	2732	744	1767	1856	1564	1767	1856	1564
Grp Volume(v), veh/h	56	113	118	22	134	136	33	11	2	111	11	15
Grp Sat Flow(s),veh/h/ln	1767	1763	1829	1767	1763	1714	1767	1856	1564	1767	1856	1564
Q Serve(g_s), s	1.7	2.5	2.5	0.7	3.1	3.3	1.0	0.2	0.1	3.3	0.2	0.4
Cycle Q Clear(g_c), s	1.7	2.5	2.5	0.7	3.1	3.3	1.0	0.2	0.1	3.3	0.2	0.4
Prop In Lane	1.00		0.08	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	75	545	566	37	507	493	51	392	331	144	489	412
V/C Ratio(X)	0.75	0.21	0.21	0.60	0.26	0.28	0.64	0.03	0.01	0.77	0.02	0.04
Avail Cap(c_a), veh/h	500	1496	1552	500	1496	1455	500	1575	1327	500	1575	1327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	13.5	13.5	25.7	14.6	14.6	25.5	16.6	16.5	23.9	14.5	14.5
Incr Delay (d2), s/veh	5.5	0.4	0.4	5.6	0.6	0.6	4.9	0.1	0.0	3.3	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.9	1.0	0.3	1.2	1.2	0.5	0.1	0.0	1.4	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.6	13.9	13.9	31.3	15.1	15.2	30.4	16.6	16.5	27.2	14.5	14.6
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		287			292			46			137	
Approach Delay, s/veh		17.2			16.4			26.5			24.8	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	22.4	8.3	17.2	6.2	21.3	5.5	20.0
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	15.0	45.0	15.0	45.0	15.0	45.0	15.0	45.0
Max Q Clear Time (g_c+I1), s	2.7	4.5	5.3	2.2	3.7	5.3	3.0	2.4
Green Ext Time (p_c), s	0.0	2.7	0.1	0.1	0.0	3.3	0.0	0.2

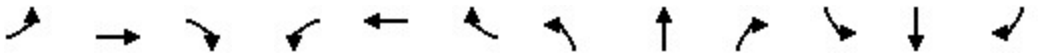
Intersection Summary	
HCM 7th Control Delay, s/veh	18.8
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	160	90	140	170	210	80	550	140	300	620	50
Future Volume (veh/h)	90	160	90	140	170	210	80	550	140	300	620	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	92	163	26	143	173	47	82	561	109	306	633	45
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	123	455	71	185	507	134	117	1108	211	446	1563	110
Arrive On Green	0.07	0.15	0.15	0.10	0.18	0.18	0.07	0.26	0.26	0.13	0.32	0.32
Sat Flow, veh/h	1767	3049	477	1767	2754	727	1767	4267	813	3428	4828	341
Grp Volume(v), veh/h	92	93	96	143	109	111	82	442	228	306	441	237
Grp Sat Flow(s),veh/h/ln	1767	1763	1764	1767	1763	1718	1767	1689	1704	1714	1689	1792
Q Serve(g_s), s	2.7	2.5	2.6	4.2	2.9	3.0	2.4	5.9	6.1	4.5	5.4	5.5
Cycle Q Clear(g_c), s	2.7	2.5	2.6	4.2	2.9	3.0	2.4	5.9	6.1	4.5	5.4	5.5
Prop In Lane	1.00		0.27	1.00		0.42	1.00		0.48	1.00		0.19
Lane Grp Cap(c), veh/h	123	263	263	185	325	316	117	877	442	446	1093	580
V/C Ratio(X)	0.75	0.35	0.37	0.77	0.34	0.35	0.70	0.50	0.52	0.69	0.40	0.41
Avail Cap(c_a), veh/h	663	1323	1323	663	1323	1289	663	2534	1278	1286	2534	1345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	20.4	20.4	23.2	18.9	19.0	24.4	16.8	16.9	22.1	14.0	14.0
Incr Delay (d2), s/veh	3.3	0.8	0.8	2.6	0.6	0.7	2.9	0.4	0.9	0.7	0.2	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.0	1.0	1.7	1.1	1.1	1.0	2.0	2.1	1.6	1.7	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.7	21.2	21.3	25.8	19.5	19.6	27.3	17.3	17.8	22.9	14.3	14.5
LnGrp LOS	C	C	C	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		281			363			752			984	
Approach Delay, s/veh		23.3			22.0			18.5			17.0	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	19.2	9.6	12.6	8.5	22.7	7.7	14.4
Change Period (Y+Rc), s	5.0	5.4	4.0	4.6	5.0	5.4	4.0	4.6
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	6.5	8.1	6.2	4.6	4.4	7.5	4.7	5.0
Green Ext Time (p_c), s	0.5	4.5	0.1	1.1	0.1	4.5	0.1	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	19.0
HCM 7th LOS	B



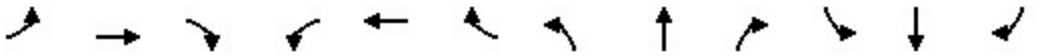
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	90	60	700	800	440	810	0	390	180	0	120
Future Volume (veh/h)	40	90	60	700	800	440	810	0	390	180	0	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	0	1856	1856	0	1856
Adj Flow Rate, veh/h	42	95	0	737	842	0	853	0	189	189	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	0	3	3	0	3
Cap, veh/h	133	945		804	1506		829	0	0	829	0	
Arrive On Green	0.08	0.27	0.00	0.23	0.43	0.00	0.24	0.00	0.00	0.24	0.00	0.00
Sat Flow, veh/h	1767	3618	0	3428	3526	1572	3428	853		3428	189	
Grp Volume(v), veh/h	42	95	0	737	842	0	853	84.6		189	36.7	
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1714	1763	1572	1714	F		1714	D	
Q Serve(g_s), s	2.7	2.4	0.0	25.2	21.6	0.0	29.0			5.3		
Cycle Q Clear(g_c), s	2.7	2.4	0.0	25.2	21.6	0.0	29.0			5.3		
Prop In Lane	1.00		0.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	133	945		804	1506		829			829		
V/C Ratio(X)	0.32	0.10		0.92	0.56		1.03			0.23		
Avail Cap(c_a), veh/h	446	945		866	1506		829			829		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.32	0.32	0.00	1.00			1.00		
Uniform Delay (d), s/veh	52.5	33.0	0.0	44.8	25.9	0.0	45.5			36.5		
Incr Delay (d2), s/veh	1.3	0.2	0.0	5.3	0.5	0.0	39.1			0.1		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	1.2	1.1	0.0	11.1	8.9	0.0	16.5			2.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.9	33.3	0.0	50.1	26.4	0.0	84.6			36.7		
LnGrp LOS	D	C		D	C		F			D		
Approach Vol, veh/h		137			1579							
Approach Delay, s/veh		39.6			37.4							
Approach LOS		D			D							

Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	34.8	44.2	41.0		15.7	63.3	41.0					
Change Period (Y+Rc), s	6.7	12.0	12.0		6.7	12.0	12.0					
Max Green Setting (Gmax), s	30.3	30.0	29.0		30.3	30.0	29.0					
Max Q Clear Time (g_c+I1), s	27.2	4.4	31.0		4.7	23.6	7.3					
Green Ext Time (p_c), s	1.0	0.5	0.0		0.1	2.9	0.6					

Intersection Summary		
HCM 7th Control Delay, s/veh	52.1	
HCM 7th LOS	D	

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	330	60	30	1040	60	430	280	50	20	50	540
Future Volume (veh/h)	260	330	60	30	1040	60	430	280	50	20	50	540
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	280	355	27	32	1118	20	462	301	45	22	54	539
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	340	1347	598	47	1090	484	410	1254	185	37	365	818
Arrive On Green	0.10	0.38	0.38	0.03	0.31	0.31	0.23	0.41	0.41	0.02	0.20	0.20
Sat Flow, veh/h	3428	3526	1566	1767	3526	1565	1767	3079	455	1767	1856	2768
Grp Volume(v), veh/h	280	355	27	32	1118	20	462	171	175	22	54	539
Grp Sat Flow(s),veh/h/ln	1714	1763	1566	1767	1763	1565	1767	1763	1772	1767	1856	1384
Q Serve(g_s), s	10.4	8.9	1.4	2.3	40.0	1.2	30.0	8.2	8.4	1.6	3.1	22.0
Cycle Q Clear(g_c), s	10.4	8.9	1.4	2.3	40.0	1.2	30.0	8.2	8.4	1.6	3.1	22.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	340	1347	598	47	1090	484	410	718	722	37	365	818
V/C Ratio(X)	0.82	0.26	0.05	0.69	1.03	0.04	1.13	0.24	0.24	0.59	0.15	0.66
Avail Cap(c_a), veh/h	795	1347	598	410	1090	484	410	718	722	410	430	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.1	27.5	25.1	62.4	44.7	31.3	49.7	25.2	25.2	62.8	43.0	39.8
Incr Delay (d2), s/veh	1.9	0.1	0.0	6.5	33.9	0.0	83.8	0.2	0.2	5.4	0.2	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	3.8	0.5	1.1	22.3	0.4	22.6	3.5	3.6	0.8	1.5	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.1	27.6	25.2	68.9	78.6	31.3	133.5	25.3	25.4	68.1	43.2	41.3
LnGrp LOS	E	C	C	E	F	C	F	C	C	E	D	D
Approach Vol, veh/h		662			1170			808			615	
Approach Delay, s/veh		40.8			77.5			87.2			42.5	
Approach LOS		D			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	54.8	34.5	31.6	17.8	45.4	7.2	58.9
Change Period (Y+Rc), s	5.0	5.4	4.5	6.2	5.0	5.4	4.5	6.2
Max Green Setting (Gmax), s	30.0	40.0	30.0	30.0	30.0	40.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	4.3	10.9	32.0	24.0	12.4	42.0	3.6	10.4
Green Ext Time (p_c), s	0.0	2.4	0.0	1.4	0.5	0.0	0.0	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	65.8
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



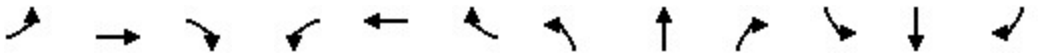
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	140	60	530	190	30	390
Future Volume (veh/h)	140	60	530	190	30	390
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	151	13	570	144	32	419
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	217	193	1455	359	69	2766
Arrive On Green	0.12	0.12	0.36	0.36	0.04	0.55
Sat Flow, veh/h	1767	1572	4212	999	1767	5233
Grp Volume(v), veh/h	151	13	474	240	32	419
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1667	1767	1689
Q Serve(g_s), s	2.5	0.2	3.2	3.3	0.5	1.2
Cycle Q Clear(g_c), s	2.5	0.2	3.2	3.3	0.5	1.2
Prop In Lane	1.00	1.00		0.60	1.00	
Lane Grp Cap(c), veh/h	217	193	1215	600	69	2766
V/C Ratio(X)	0.69	0.07	0.39	0.40	0.47	0.15
Avail Cap(c_a), veh/h	1969	1752	5532	2731	1158	4979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	11.8	7.3	7.3	14.4	3.4
Incr Delay (d2), s/veh	4.0	0.1	0.2	0.4	1.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.1	0.7	0.7	0.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.8	12.0	7.5	7.7	16.2	3.5
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	164		714			451
Approach Delay, s/veh	16.4		7.6			4.4
Approach LOS	B		A			A

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	8.8	5.7	16.1		21.8
Change Period (Y+Rc), s	5.0	4.5	5.1		5.1
Max Green Setting (Gmax), s	34.0	20.0	50.0		30.0
Max Q Clear Time (g_c+I1), s	4.5	2.5	5.3		3.2
Green Ext Time (p_c), s	0.4	0.0	5.3		2.8

Intersection Summary	
HCM 7th Control Delay, s/veh	7.6
HCM 7th LOS	A

Notes

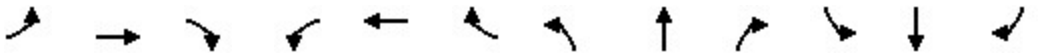
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	130	40	30	200	60	10	10	20	20	10	40
Future Volume (veh/h)	40	130	40	30	200	60	10	10	20	20	10	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	48	157	29	36	241	53	12	12	0	24	12	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	71	1023	185	57	967	209	22	297	252	41	317	269
Arrive On Green	0.04	0.34	0.34	0.03	0.34	0.34	0.01	0.16	0.00	0.02	0.17	0.00
Sat Flow, veh/h	1767	2978	538	1767	2880	621	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	48	92	94	36	146	148	12	12	0	24	12	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1754	1767	1763	1738	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	1.2	1.6	1.7	0.9	2.7	2.8	0.3	0.2	0.0	0.6	0.2	0.0
Cycle Q Clear(g_c), s	1.2	1.6	1.7	0.9	2.7	2.8	0.3	0.2	0.0	0.6	0.2	0.0
Prop In Lane	1.00		0.31	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	606	603	57	592	583	22	297	252	41	317	269
V/C Ratio(X)	0.68	0.15	0.16	0.63	0.25	0.25	0.55	0.04	0.00	0.59	0.04	0.00
Avail Cap(c_a), veh/h	585	1749	1740	585	1749	1725	585	1841	1560	585	1841	1560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.5	10.3	10.3	21.7	10.9	10.9	22.3	16.1	0.0	21.9	15.7	0.0
Incr Delay (d2), s/veh	4.2	0.2	0.3	4.3	0.5	0.5	7.7	0.1	0.0	5.0	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.5	0.6	0.4	0.9	0.9	0.2	0.1	0.0	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.7	10.6	10.6	26.0	11.4	11.4	30.0	16.2	0.0	26.9	15.8	0.0
LnGrp LOS	C	B	B	C	B	B	C	B		C	B	
Approach Vol, veh/h		234			330			24			36	
Approach Delay, s/veh		13.7			13.0			23.1			23.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	21.6	5.0	13.3	5.8	21.2	4.6	13.8
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	15.0	45.0	15.0	45.0	15.0	45.0	15.0	45.0
Max Q Clear Time (g_c+I1), s	2.9	3.7	2.6	2.2	3.2	4.8	2.3	2.2
Green Ext Time (p_c), s	0.0	2.2	0.0	0.1	0.0	3.6	0.0	0.1

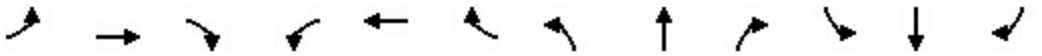
Intersection Summary	
HCM 7th Control Delay, s/veh	14.2
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	70	20	40	160	170	100	630	100	150	350	90
Future Volume (veh/h)	40	70	20	40	160	170	100	630	100	150	350	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	44	77	2	44	176	22	110	692	94	165	385	65
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	82	549	14	82	493	61	142	1376	185	320	1390	228
Arrive On Green	0.05	0.16	0.16	0.05	0.16	0.16	0.08	0.30	0.30	0.09	0.32	0.32
Sat Flow, veh/h	1767	3510	91	1767	3155	389	1767	4513	607	3428	4379	720
Grp Volume(v), veh/h	44	39	40	44	97	101	110	516	270	165	294	156
Grp Sat Flow(s),veh/h/ln	1767	1763	1838	1767	1763	1781	1767	1689	1743	1714	1689	1722
Q Serve(g_s), s	1.2	0.9	0.9	1.2	2.3	2.4	2.9	6.0	6.1	2.2	3.1	3.2
Cycle Q Clear(g_c), s	1.2	0.9	0.9	1.2	2.3	2.4	2.9	6.0	6.1	2.2	3.1	3.2
Prop In Lane	1.00		0.05	1.00		0.22	1.00		0.35	1.00		0.42
Lane Grp Cap(c), veh/h	82	276	287	82	276	278	142	1030	531	320	1072	547
V/C Ratio(X)	0.54	0.14	0.14	0.54	0.35	0.36	0.77	0.50	0.51	0.52	0.27	0.28
Avail Cap(c_a), veh/h	743	1482	1545	743	1482	1497	743	2838	1465	1441	2838	1447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	17.3	17.3	22.2	17.9	18.0	21.4	13.6	13.6	20.6	12.1	12.2
Incr Delay (d2), s/veh	2.0	0.2	0.2	2.0	0.8	0.8	3.3	0.4	0.8	0.5	0.1	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.3	0.4	0.5	0.9	0.9	1.2	1.8	2.0	0.8	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.2	17.5	17.5	24.2	18.7	18.7	24.8	14.0	14.4	21.0	12.3	12.5
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		123			242			896			615	
Approach Delay, s/veh		19.9			19.7			15.4			14.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	19.9	6.2	12.0	8.8	20.5	6.2	12.0
Change Period (Y+Rc), s	5.0	5.4	4.0	4.6	5.0	5.4	4.0	4.6
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	4.2	8.1	3.2	2.9	4.9	5.2	3.2	4.4
Green Ext Time (p_c), s	0.2	5.4	0.0	0.4	0.1	2.9	0.0	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	16.0
HCM 7th LOS	B



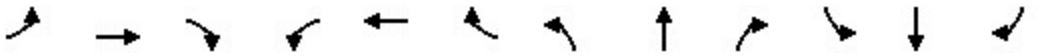
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	386	140	550	380	236	320	0	683	475	0	110
Future Volume (veh/h)	80	386	140	550	380	236	320	0	683	475	0	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	0	1856	1856	0	1856
Adj Flow Rate, veh/h	85	411	0	585	404	0	340	0	597	505	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	0	3	3	0	3
Cap, veh/h	178	1248		665	1576		593	0	0	593	0	
Arrive On Green	0.10	0.35	0.00	0.19	0.45	0.00	0.17	0.00	0.00	0.17	0.00	0.00
Sat Flow, veh/h	1767	3618	0	3428	3526	1572	3428	340		3428	505	
Grp Volume(v), veh/h	85	411	0	585	404	0	340	42.6		505	50.1	
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1714	1763	1572	1714	D		1714	D	
Q Serve(g_s), s	5.0	9.4	0.0	18.2	7.9	0.0	10.0			15.7		
Cycle Q Clear(g_c), s	5.0	9.4	0.0	18.2	7.9	0.0	10.0			15.7		
Prop In Lane	1.00		0.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	178	1248		665	1576		593			593		
V/C Ratio(X)	0.48	0.33		0.88	0.26		0.57			0.85		
Avail Cap(c_a), veh/h	406	1248		789	1576		841			841		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.86	0.86	0.00	1.00			1.00		
Uniform Delay (d), s/veh	46.7	26.0	0.0	43.1	19.0	0.0	41.8			44.1		
Incr Delay (d2), s/veh	2.0	0.7	0.0	8.7	0.3	0.0	0.9			6.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	2.3	4.0	0.0	8.4	3.2	0.0	4.2			7.0		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.7	26.7	0.0	51.8	19.3	0.0	42.6			50.1		
LnGrp LOS	D	C		D	B		D			D		
Approach Vol, veh/h		496			989							
Approach Delay, s/veh		30.4			38.6							
Approach LOS		C			D							

Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	28.0	50.9	31.0		17.8	61.2	31.0					
Change Period (Y+Rc), s	6.7	12.0	12.0		6.7	12.0	12.0					
Max Green Setting (Gmax), s	25.3	27.0	27.0		25.3	27.0	27.0					
Max Q Clear Time (g_c+I1), s	20.2	11.4	12.0		7.0	9.9	17.7					
Green Ext Time (p_c), s	1.1	2.3	1.0		0.2	2.3	1.3					

Intersection Summary	
HCM 7th Control Delay, s/veh	39.9
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	537	827	180	40	453	90	90	270	90	100	270	673
Future Volume (veh/h)	537	827	180	40	453	90	90	270	90	100	270	673
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	565	871	100	42	477	21	95	284	73	105	284	392
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	685	1362	605	70	796	353	123	571	144	136	394	1141
Arrive On Green	0.20	0.39	0.39	0.04	0.23	0.23	0.07	0.21	0.21	0.08	0.21	0.21
Sat Flow, veh/h	3428	3526	1566	1767	3526	1562	1767	2783	702	1767	1856	2768
Grp Volume(v), veh/h	565	871	100	42	477	21	95	178	179	105	284	392
Grp Sat Flow(s),veh/h/ln	1714	1763	1566	1767	1763	1562	1767	1763	1723	1767	1856	1384
Q Serve(g_s), s	11.4	14.5	3.0	1.7	8.8	0.8	3.8	6.4	6.7	4.2	10.3	7.0
Cycle Q Clear(g_c), s	11.4	14.5	3.0	1.7	8.8	0.8	3.8	6.4	6.7	4.2	10.3	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	685	1362	605	70	796	353	123	362	354	136	394	1141
V/C Ratio(X)	0.82	0.64	0.17	0.60	0.60	0.06	0.77	0.49	0.51	0.77	0.72	0.34
Avail Cap(c_a), veh/h	1424	1952	867	734	1952	865	734	732	716	734	771	1702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	18.1	14.5	34.1	25.0	21.9	33.0	25.4	25.5	32.7	26.5	14.5
Incr Delay (d2), s/veh	1.0	0.5	0.1	3.1	0.7	0.1	3.8	1.0	1.1	3.5	2.5	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	5.4	1.0	0.8	3.5	0.3	1.7	2.6	2.7	1.9	4.5	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.7	18.6	14.7	37.2	25.8	22.0	36.8	26.4	26.6	36.2	29.0	14.7
LnGrp LOS	C	B	B	D	C	C	D	C	C	D	C	B
Approach Vol, veh/h		1536			540			452			781	
Approach Delay, s/veh		22.0			26.5			28.7			22.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	33.3	9.5	21.5	19.4	21.7	10.1	21.0
Change Period (Y+Rc), s	5.0	5.4	4.5	6.2	5.0	5.4	4.5	6.2
Max Green Setting (Gmax), s	30.0	40.0	30.0	30.0	30.0	40.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	3.7	16.5	5.8	12.3	13.4	10.8	6.2	8.7
Green Ext Time (p_c), s	0.0	6.7	0.1	3.1	1.0	3.3	0.1	2.0

Intersection Summary	
HCM 7th Control Delay, s/veh	23.8
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



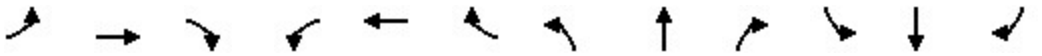
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	233	101	730	187	70	780
Future Volume (veh/h)	233	101	730	187	70	780
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	243	27	760	150	73	812
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	334	297	1597	312	123	2828
Arrive On Green	0.19	0.19	0.38	0.38	0.07	0.56
Sat Flow, veh/h	1767	1572	4413	830	1767	5233
Grp Volume(v), veh/h	243	27	603	307	73	812
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1700	1767	1689
Q Serve(g_s), s	5.2	0.6	5.4	5.5	1.6	3.4
Cycle Q Clear(g_c), s	5.2	0.6	5.4	5.5	1.6	3.4
Prop In Lane	1.00	1.00		0.49	1.00	
Lane Grp Cap(c), veh/h	334	297	1270	639	123	2828
V/C Ratio(X)	0.73	0.09	0.47	0.48	0.59	0.29
Avail Cap(c_a), veh/h	1504	1338	4227	2127	885	3804
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	13.4	9.5	9.5	18.0	4.6
Incr Delay (d2), s/veh	3.0	0.1	0.3	0.6	1.7	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.2	1.4	1.5	0.6	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	18.3	13.5	9.7	10.1	19.7	4.7
LnGrp LOS	B	B	A	B	B	A
Approach Vol, veh/h	270		910			885
Approach Delay, s/veh	17.8		9.8			5.9
Approach LOS	B		A			A

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		12.5	7.3	20.1		27.4
Change Period (Y+Rc), s		5.0	4.5	5.1		5.1
Max Green Setting (Gmax), s		34.0	20.0	50.0		30.0
Max Q Clear Time (g_c+I1), s		7.2	3.6	7.5		5.4
Green Ext Time (p_c), s		0.8	0.1	7.1		5.9

Intersection Summary	
HCM 7th Control Delay, s/veh	9.2
HCM 7th LOS	A

Notes

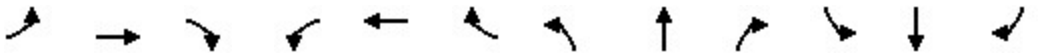
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	217	10	20	214	100	30	10	40	106	10	80
Future Volume (veh/h)	51	217	10	20	214	100	30	10	40	106	10	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	57	241	9	22	238	70	33	11	2	118	11	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	76	1069	40	37	773	222	51	387	326	153	493	416
Arrive On Green	0.04	0.31	0.31	0.02	0.29	0.29	0.03	0.21	0.21	0.09	0.27	0.27
Sat Flow, veh/h	1767	3465	129	1767	2697	774	1767	1856	1564	1767	1856	1564
Grp Volume(v), veh/h	57	122	128	22	154	154	33	11	2	118	11	15
Grp Sat Flow(s),veh/h/ln	1767	1763	1831	1767	1763	1708	1767	1856	1564	1767	1856	1564
Q Serve(g_s), s	1.7	2.7	2.8	0.7	3.6	3.8	1.0	0.3	0.1	3.5	0.2	0.4
Cycle Q Clear(g_c), s	1.7	2.7	2.8	0.7	3.6	3.8	1.0	0.3	0.1	3.5	0.2	0.4
Prop In Lane	1.00		0.07	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	544	565	37	505	490	51	387	326	153	493	416
V/C Ratio(X)	0.75	0.22	0.23	0.60	0.30	0.32	0.64	0.03	0.01	0.77	0.02	0.04
Avail Cap(c_a), veh/h	498	1490	1548	498	1490	1444	498	1569	1322	498	1569	1322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	13.7	13.7	25.8	14.8	14.9	25.6	16.8	16.7	23.8	14.4	14.5
Incr Delay (d2), s/veh	5.6	0.4	0.4	5.6	0.7	0.8	4.9	0.1	0.0	3.1	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	1.0	0.3	1.4	1.4	0.5	0.1	0.0	1.5	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	30.8	14.1	14.1	31.5	15.5	15.7	30.5	16.8	16.7	26.9	14.5	14.6
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		307			330			46			144	
Approach Delay, s/veh		17.2			16.7			26.6			24.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	22.4	8.6	17.1	6.3	21.3	5.5	20.1
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	15.0	45.0	15.0	45.0	15.0	45.0	15.0	45.0
Max Q Clear Time (g_c+I1), s	2.7	4.8	5.5	2.3	3.7	5.8	3.0	2.4
Green Ext Time (p_c), s	0.0	2.9	0.1	0.1	0.0	3.8	0.0	0.2

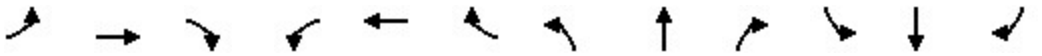
Intersection Summary	
HCM 7th Control Delay, s/veh	18.8
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	160	99	140	170	210	95	550	140	300	620	59
Future Volume (veh/h)	104	160	99	140	170	210	95	550	140	300	620	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	106	163	20	143	173	46	97	561	109	306	633	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	137	465	56	185	481	124	127	1110	212	446	1521	124
Arrive On Green	0.08	0.15	0.15	0.10	0.17	0.17	0.07	0.26	0.26	0.13	0.32	0.32
Sat Flow, veh/h	1767	3162	382	1767	2767	715	1767	4267	813	3428	4772	389
Grp Volume(v), veh/h	106	90	93	143	108	111	97	442	228	306	447	238
Grp Sat Flow(s),veh/h/ln	1767	1763	1782	1767	1763	1719	1767	1689	1704	1714	1689	1783
Q Serve(g_s), s	3.1	2.4	2.5	4.2	2.9	3.0	2.9	5.9	6.1	4.5	5.5	5.6
Cycle Q Clear(g_c), s	3.1	2.4	2.5	4.2	2.9	3.0	2.9	5.9	6.1	4.5	5.5	5.6
Prop In Lane	1.00		0.21	1.00		0.42	1.00		0.48	1.00		0.22
Lane Grp Cap(c), veh/h	137	259	262	185	307	299	127	879	443	446	1076	568
V/C Ratio(X)	0.77	0.35	0.36	0.77	0.35	0.37	0.77	0.50	0.52	0.69	0.41	0.42
Avail Cap(c_a), veh/h	666	1328	1343	666	1328	1296	666	2545	1284	1292	2545	1344
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	20.4	20.4	23.1	19.3	19.4	24.2	16.7	16.8	22.0	14.2	14.2
Incr Delay (d2), s/veh	3.4	0.8	0.8	2.6	0.7	0.8	3.6	0.4	0.9	0.7	0.3	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.0	1.0	1.7	1.1	1.1	1.2	2.0	2.1	1.6	1.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.4	21.1	21.2	25.7	20.0	20.1	27.8	17.2	17.7	22.7	14.5	14.7
LnGrp LOS	C	C	C	C	B	C	C	B	B	C	B	B
Approach Vol, veh/h		289			362			767			991	
Approach Delay, s/veh		23.5			22.3			18.7			17.1	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	19.2	9.6	12.4	8.8	22.3	8.1	13.8
Change Period (Y+Rc), s	5.0	5.4	4.0	4.6	5.0	5.4	4.0	4.6
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	6.5	8.1	6.2	4.5	4.9	7.6	5.1	5.0
Green Ext Time (p_c), s	0.5	4.5	0.1	1.0	0.1	4.5	0.1	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	19.1
HCM 7th LOS	B



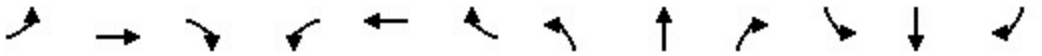
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	92	60	713	801	449	810	0	396	182	0	120
Future Volume (veh/h)	40	92	60	713	801	449	810	0	396	182	0	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	0	1856	1856	0	1856
Adj Flow Rate, veh/h	42	97	0	751	843	0	853	0	192	192	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	0	3	3	0	3
Cap, veh/h	133	933		815	1506		829	0	0	829	0	
Arrive On Green	0.08	0.26	0.00	0.24	0.43	0.00	0.24	0.00	0.00	0.24	0.00	0.00
Sat Flow, veh/h	1767	3618	0	3428	3526	1572	3428	853		3428	192	
Grp Volume(v), veh/h	42	97	0	751	843	0	853	84.6		192	36.7	
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1714	1763	1572	1714	F		1714	D	
Q Serve(g_s), s	2.7	2.5	0.0	25.7	21.6	0.0	29.0			5.4		
Cycle Q Clear(g_c), s	2.7	2.5	0.0	25.7	21.6	0.0	29.0			5.4		
Prop In Lane	1.00		0.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	133	933		815	1506		829			829		
V/C Ratio(X)	0.32	0.10		0.92	0.56		1.03			0.23		
Avail Cap(c_a), veh/h	446	933		866	1506		829			829		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.30	0.30	0.00	1.00			1.00		
Uniform Delay (d), s/veh	52.5	33.4	0.0	44.6	25.9	0.0	45.5			36.6		
Incr Delay (d2), s/veh	1.3	0.2	0.0	5.3	0.5	0.0	39.1			0.1		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	1.2	1.1	0.0	11.3	9.0	0.0	16.5			2.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.9	33.6	0.0	50.0	26.3	0.0	84.6			36.7		
LnGrp LOS	D	C		D	C		F			D		
Approach Vol, veh/h		139			1594							
Approach Delay, s/veh		39.7			37.5							
Approach LOS		D			D							

Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	35.2	43.8	41.0		15.7	63.3	41.0					
Change Period (Y+Rc), s	6.7	12.0	12.0		6.7	12.0	12.0					
Max Green Setting (Gmax), s	30.3	30.0	29.0		30.3	30.0	29.0					
Max Q Clear Time (g_c+I1), s	27.7	4.5	31.0		4.7	23.6	7.4					
Green Ext Time (p_c), s	0.9	0.5	0.0		0.1	2.9	0.6					

Intersection Summary	
HCM 7th Control Delay, s/veh	52.0
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	336	60	30	1041	60	430	280	50	20	50	562
Future Volume (veh/h)	264	336	60	30	1041	60	430	280	50	20	50	562
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	284	361	28	32	1119	20	462	301	45	22	54	563
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	343	1340	595	46	1079	479	406	1266	187	37	376	838
Arrive On Green	0.10	0.38	0.38	0.03	0.31	0.31	0.23	0.41	0.41	0.02	0.20	0.20
Sat Flow, veh/h	3428	3526	1566	1767	3526	1565	1767	3079	455	1767	1856	2768
Grp Volume(v), veh/h	284	361	28	32	1119	20	462	171	175	22	54	563
Grp Sat Flow(s),veh/h/ln	1714	1763	1566	1767	1763	1565	1767	1763	1772	1767	1856	1384
Q Serve(g_s), s	10.6	9.2	1.5	2.3	40.0	1.2	30.0	8.3	8.4	1.6	3.1	23.3
Cycle Q Clear(g_c), s	10.6	9.2	1.5	2.3	40.0	1.2	30.0	8.3	8.4	1.6	3.1	23.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	343	1340	595	46	1079	479	406	725	729	37	376	838
V/C Ratio(X)	0.83	0.27	0.05	0.69	1.04	0.04	1.14	0.24	0.24	0.59	0.14	0.67
Avail Cap(c_a), veh/h	787	1340	595	406	1079	479	406	725	729	406	426	913
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	28.0	25.6	63.1	45.3	31.9	50.3	25.1	25.1	63.4	42.8	39.9
Incr Delay (d2), s/veh	2.0	0.1	0.0	6.6	37.4	0.0	88.2	0.2	0.2	5.5	0.2	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	3.9	0.6	1.1	22.8	0.5	23.0	3.5	3.6	0.8	1.5	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.6	28.1	25.6	69.7	82.8	31.9	138.6	25.2	25.3	68.9	43.0	41.6
LnGrp LOS	E	C	C	E	F	C	F	C	C	E	D	D
Approach Vol, veh/h		673			1171			808			639	
Approach Delay, s/veh		41.3			81.5			90.1			42.6	
Approach LOS		D			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	55.1	34.5	32.7	18.1	45.4	7.3	59.9
Change Period (Y+Rc), s	5.0	5.4	4.5	6.2	5.0	5.4	4.5	6.2
Max Green Setting (Gmax), s	30.0	40.0	30.0	30.0	30.0	40.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	4.3	11.2	32.0	25.3	12.6	42.0	3.6	10.4
Green Ext Time (p_c), s	0.0	2.5	0.0	1.2	0.5	0.0	0.0	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	67.9
HCM 7th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

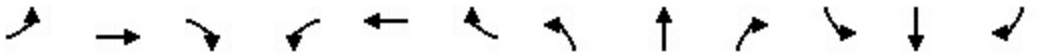


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	162	61	530	194	30	390
Future Volume (veh/h)	162	61	530	194	30	390
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	174	14	570	147	32	419
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	248	221	1431	361	69	2723
Arrive On Green	0.14	0.14	0.36	0.36	0.04	0.54
Sat Flow, veh/h	1767	1572	4193	1015	1767	5233
Grp Volume(v), veh/h	174	14	476	241	32	419
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1664	1767	1689
Q Serve(g_s), s	2.9	0.2	3.3	3.4	0.6	1.3
Cycle Q Clear(g_c), s	2.9	0.2	3.3	3.4	0.6	1.3
Prop In Lane	1.00	1.00		0.61	1.00	
Lane Grp Cap(c), veh/h	248	221	1200	592	69	2723
V/C Ratio(X)	0.70	0.06	0.40	0.41	0.47	0.15
Avail Cap(c_a), veh/h	1915	1704	5382	2653	1127	4844
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	11.7	7.6	7.6	14.8	3.7
Incr Delay (d2), s/veh	3.6	0.1	0.2	0.5	1.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.1	0.7	0.8	0.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.4	11.8	7.8	8.1	16.6	3.7
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	188		717			451
Approach Delay, s/veh	16.1		7.9			4.6
Approach LOS	B		A			A

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		9.4	5.7	16.3		22.0
Change Period (Y+Rc), s		5.0	4.5	5.1		5.1
Max Green Setting (Gmax), s		34.0	20.0	50.0		30.0
Max Q Clear Time (g_c+I1), s		4.9	2.6	5.4		3.3
Green Ext Time (p_c), s		0.5	0.0	5.3		2.8

Intersection Summary	
HCM 7th Control Delay, s/veh	7.9
HCM 7th LOS	A

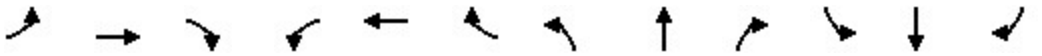
Notes
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	149	40	30	213	60	10	10	20	29	10	40
Future Volume (veh/h)	41	149	40	30	213	60	10	10	20	29	10	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	49	180	31	36	257	54	12	12	0	35	12	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	71	1010	171	57	950	196	22	320	271	55	355	301
Arrive On Green	0.04	0.34	0.34	0.03	0.33	0.33	0.01	0.17	0.00	0.03	0.19	0.00
Sat Flow, veh/h	1767	3013	509	1767	2905	600	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	49	104	107	36	154	157	12	12	0	35	12	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1759	1767	1763	1742	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	1.3	1.9	2.0	0.9	3.0	3.1	0.3	0.3	0.0	0.9	0.2	0.0
Cycle Q Clear(g_c), s	1.3	1.9	2.0	0.9	3.0	3.1	0.3	0.3	0.0	0.9	0.2	0.0
Prop In Lane	1.00		0.29	1.00		0.34	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	591	590	57	576	569	22	320	271	55	355	301
V/C Ratio(X)	0.69	0.18	0.18	0.64	0.27	0.28	0.55	0.04	0.00	0.63	0.03	0.00
Avail Cap(c_a), veh/h	569	1703	1700	569	1703	1683	569	1792	1519	569	1792	1519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.1	10.9	11.0	22.3	11.6	11.6	22.9	16.1	0.0	22.3	15.3	0.0
Incr Delay (d2), s/veh	4.3	0.3	0.3	4.4	0.5	0.6	7.8	0.1	0.0	4.4	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	0.7	0.4	1.0	1.1	0.2	0.1	0.0	0.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.4	11.2	11.3	26.6	12.1	12.2	30.7	16.2	0.0	26.7	15.4	0.0
LnGrp LOS	C	B	B	C	B	B	C	B		C	B	
Approach Vol, veh/h		260			347			24			47	
Approach Delay, s/veh		14.1			13.6			23.4			23.8	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	21.6	5.5	14.0	5.9	21.2	4.6	14.9
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	15.0	45.0	15.0	45.0	15.0	45.0	15.0	45.0
Max Q Clear Time (g_c+I1), s	2.9	4.0	2.9	2.3	3.3	5.1	2.3	2.2
Green Ext Time (p_c), s	0.0	2.5	0.0	0.1	0.0	3.8	0.0	0.1

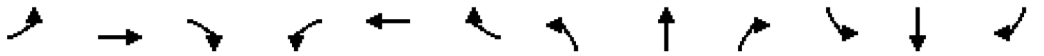
Intersection Summary	
HCM 7th Control Delay, s/veh	14.9
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	70	29	40	160	170	109	630	100	150	350	94
Future Volume (veh/h)	59	70	29	40	160	170	109	630	100	150	350	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	65	77	5	44	176	23	120	692	94	165	385	66
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	106	570	37	81	488	63	156	1362	183	315	1334	223
Arrive On Green	0.06	0.17	0.17	0.05	0.16	0.16	0.09	0.30	0.30	0.09	0.31	0.31
Sat Flow, veh/h	1767	3361	216	1767	3137	404	1767	4513	607	3428	4368	729
Grp Volume(v), veh/h	65	40	42	44	98	101	120	516	270	165	295	156
Grp Sat Flow(s),veh/h/ln	1767	1763	1814	1767	1763	1778	1767	1689	1743	1714	1689	1720
Q Serve(g_s), s	1.7	0.9	1.0	1.2	2.4	2.5	3.2	6.1	6.2	2.2	3.2	3.4
Cycle Q Clear(g_c), s	1.7	0.9	1.0	1.2	2.4	2.5	3.2	6.1	6.2	2.2	3.2	3.4
Prop In Lane	1.00		0.12	1.00		0.23	1.00		0.35	1.00		0.42
Lane Grp Cap(c), veh/h	106	299	308	81	274	277	156	1019	526	315	1031	525
V/C Ratio(X)	0.61	0.13	0.14	0.54	0.36	0.37	0.77	0.51	0.51	0.52	0.29	0.30
Avail Cap(c_a), veh/h	727	1450	1493	727	1450	1463	727	2778	1434	1410	2778	1415
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	17.2	17.2	22.7	18.4	18.4	21.7	14.0	14.0	21.1	12.9	12.9
Incr Delay (d2), s/veh	2.1	0.2	0.2	2.1	0.8	0.8	3.0	0.4	0.8	0.5	0.2	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	0.4	0.5	0.9	1.0	1.3	1.9	2.1	0.8	1.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.4	17.4	17.4	24.8	19.1	19.2	24.7	14.4	14.8	21.6	13.0	13.2
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		147			243			906			616	
Approach Delay, s/veh		20.5			20.2			15.9			15.4	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	20.1	6.2	12.8	9.3	20.3	6.9	12.2
Change Period (Y+Rc), s	5.0	5.4	4.0	4.6	5.0	5.4	4.0	4.6
Max Green Setting (Gmax), s	20.0	40.0	20.0	40.0	20.0	40.0	20.0	40.0
Max Q Clear Time (g_c+I1), s	4.2	8.2	3.2	3.0	5.2	5.4	3.7	4.5
Green Ext Time (p_c), s	0.2	5.4	0.0	0.4	0.1	2.9	0.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	16.6
HCM 7th LOS	B



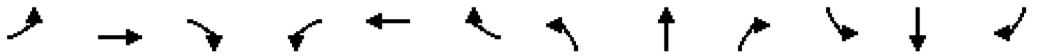
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	390	160	750	410	260	360	0	730	500	0	120
Future Volume (veh/h)	100	390	160	750	410	260	360	0	730	500	0	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	0	1856	1856	0	1856
Adj Flow Rate, veh/h	106	415	0	798	436	0	383	0	662	532	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	0	3	3	0	3
Cap, veh/h	185	1094		789	1535		619	0	0	619	0	
Arrive On Green	0.10	0.31	0.00	0.23	0.44	0.00	0.18	0.00	0.00	0.18	0.00	0.00
Sat Flow, veh/h	1767	3618	0	3428	3526	1572	3428	383		3428	532	
Grp Volume(v), veh/h	106	415	0	798	436	0	383	42.6		532	50.5	
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1714	1763	1572	1714	D		1714	D	
Q Serve(g_s), s	6.3	10.1	0.0	25.3	8.8	0.0	11.3			16.6		
Cycle Q Clear(g_c), s	6.3	10.1	0.0	25.3	8.8	0.0	11.3			16.6		
Prop In Lane	1.00		0.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	185	1094		789	1535		619			619		
V/C Ratio(X)	0.57	0.38		1.01	0.28		0.62			0.86		
Avail Cap(c_a), veh/h	406	1094		789	1535		841			841		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.75	0.75	0.00	1.00			1.00		
Uniform Delay (d), s/veh	46.9	29.7	0.0	42.3	20.0	0.0	41.6			43.7		
Incr Delay (d2), s/veh	2.8	1.0	0.0	30.8	0.3	0.0	1.0			6.8		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	2.9	4.4	0.0	13.8	3.6	0.0	4.8			7.4		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.7	30.7	0.0	73.1	20.4	0.0	42.6			50.5		
LnGrp LOS	D	C		F	C		D			D		
Approach Vol, veh/h		521			1234							
Approach Delay, s/veh		34.5			54.5							
Approach LOS		C			D							

Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	32.0	46.1	31.9		18.2	59.9	31.9					
Change Period (Y+Rc), s	6.7	12.0	12.0		6.7	12.0	12.0					
Max Green Setting (Gmax), s	25.3	27.0	27.0		25.3	27.0	27.0					
Max Q Clear Time (g_c+I1), s	27.3	12.1	13.3		8.3	10.8	18.6					
Green Ext Time (p_c), s	0.0	2.3	1.1		0.2	2.5	1.3					

Intersection Summary			
HCM 7th Control Delay, s/veh		48.1	
HCM 7th LOS		D	

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	530	900	210	40	590	90	120	300	100	110	280	810
Future Volume (veh/h)	530	900	210	40	590	90	120	300	100	110	280	810
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	558	947	125	42	621	23	126	316	83	116	295	610
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	654	1437	638	64	892	395	159	651	168	147	424	1161
Arrive On Green	0.19	0.41	0.41	0.04	0.25	0.25	0.09	0.23	0.23	0.08	0.23	0.23
Sat Flow, veh/h	3428	3526	1567	1767	3526	1563	1767	2769	716	1767	1856	2768
Grp Volume(v), veh/h	558	947	125	42	621	23	126	199	200	116	295	610
Grp Sat Flow(s),veh/h/ln	1714	1763	1567	1767	1763	1563	1767	1763	1721	1767	1856	1384
Q Serve(g_s), s	14.0	19.3	4.6	2.1	14.2	1.0	6.2	8.7	8.9	5.7	12.9	14.6
Cycle Q Clear(g_c), s	14.0	19.3	4.6	2.1	14.2	1.0	6.2	8.7	8.9	5.7	12.9	14.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	654	1437	638	64	892	395	159	414	404	147	424	1161
V/C Ratio(X)	0.85	0.66	0.20	0.65	0.70	0.06	0.79	0.48	0.49	0.79	0.70	0.53
Avail Cap(c_a), veh/h	1159	1590	706	598	1590	705	598	596	582	598	627	1464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	21.3	16.9	42.2	30.0	25.1	39.6	29.3	29.4	39.9	31.4	19.2
Incr Delay (d2), s/veh	1.3	0.9	0.1	4.1	1.0	0.1	3.4	0.9	0.9	3.5	2.1	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	7.6	1.6	1.0	5.9	0.4	2.8	3.6	3.7	2.6	5.8	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.9	22.2	17.1	46.3	31.0	25.2	42.9	30.1	30.3	43.4	33.5	19.6
LnGrp LOS	D	C	B	D	C	C	D	C	C	D	C	B
Approach Vol, veh/h		1630			686			525			1021	
Approach Delay, s/veh		26.5			31.8			33.3			26.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	41.6	12.5	26.5	21.9	27.8	11.9	27.0
Change Period (Y+Rc), s	5.0	5.4	4.5	6.2	5.0	5.4	4.5	6.2
Max Green Setting (Gmax), s	30.0	40.0	30.0	30.0	30.0	40.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	4.1	21.3	8.2	16.6	16.0	16.2	7.7	10.9
Green Ext Time (p_c), s	0.0	6.8	0.1	3.7	1.0	4.3	0.1	2.2

Intersection Summary	
HCM 7th Control Delay, s/veh	28.3
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

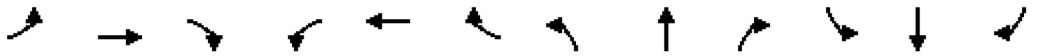


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	250	110	750	270	80	930
Future Volume (veh/h)	250	110	750	270	80	930
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	260	30	781	225	83	969
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	350	312	1531	437	129	2880
Arrive On Green	0.20	0.20	0.39	0.39	0.07	0.57
Sat Flow, veh/h	1767	1572	4075	1115	1767	5233
Grp Volume(v), veh/h	260	30	674	332	83	969
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1646	1767	1689
Q Serve(g_s), s	6.0	0.7	6.6	6.7	2.0	4.4
Cycle Q Clear(g_c), s	6.0	0.7	6.6	6.7	2.0	4.4
Prop In Lane	1.00	1.00		0.68	1.00	
Lane Grp Cap(c), veh/h	350	312	1323	645	129	2880
V/C Ratio(X)	0.74	0.10	0.51	0.51	0.64	0.34
Avail Cap(c_a), veh/h	1819	1618	3343	1630	673	7470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	14.2	10.0	10.0	19.5	5.0
Incr Delay (d2), s/veh	3.1	0.1	0.3	0.6	2.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.2	1.8	1.9	0.8	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	19.4	14.3	10.3	10.7	21.5	5.1
LnGrp LOS	B	B	B	B	C	A
Approach Vol, veh/h	290		1006			1052
Approach Delay, s/veh	18.9		10.4			6.4
Approach LOS	B		B			A

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		13.6	7.7	22.1		29.7
Change Period (Y+Rc), s		5.0	4.5	5.1		5.1
Max Green Setting (Gmax), s		44.6	16.5	42.9		63.9
Max Q Clear Time (g_c+I1), s		8.0	4.0	8.7		6.4
Green Ext Time (p_c), s		0.9	0.1	7.9		8.4

Intersection Summary	
HCM 7th Control Delay, s/veh	9.7
HCM 7th LOS	A

Notes
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	250	10	20	280	110	40	10	40	110	10	100
Future Volume (veh/h)	50	250	10	20	280	110	40	10	40	110	10	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	56	278	9	22	311	91	44	11	1	122	11	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	75	1065	34	37	766	220	63	391	330	159	492	415
Arrive On Green	0.04	0.31	0.31	0.02	0.28	0.28	0.04	0.21	0.21	0.09	0.27	0.27
Sat Flow, veh/h	1767	3484	112	1767	2696	775	1767	1856	1564	1767	1856	1564
Grp Volume(v), veh/h	56	140	147	22	201	201	44	11	1	122	11	15
Grp Sat Flow(s),veh/h/ln	1767	1763	1834	1767	1763	1708	1767	1856	1564	1767	1856	1564
Q Serve(g_s), s	1.7	3.2	3.2	0.7	5.0	5.1	1.3	0.3	0.0	3.6	0.2	0.4
Cycle Q Clear(g_c), s	1.7	3.2	3.2	0.7	5.0	5.1	1.3	0.3	0.0	3.6	0.2	0.4
Prop In Lane	1.00		0.06	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	75	539	561	37	501	486	63	391	330	159	492	415
V/C Ratio(X)	0.75	0.26	0.26	0.60	0.40	0.41	0.69	0.03	0.00	0.77	0.02	0.04
Avail Cap(c_a), veh/h	593	1740	1811	362	1510	1464	494	899	757	988	1417	1195
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	14.1	14.1	26.1	15.5	15.6	25.6	16.8	16.7	23.9	14.6	14.6
Incr Delay (d2), s/veh	5.6	0.5	0.5	5.6	1.1	1.2	5.0	0.1	0.0	2.9	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.2	1.2	0.3	1.9	1.9	0.6	0.1	0.0	1.6	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.0	14.6	14.6	31.7	16.6	16.8	30.6	16.9	16.7	26.7	14.6	14.7
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		343			424			56			148	
Approach Delay, s/veh		17.3			17.5			27.6			24.6	
Approach LOS		B			B			C			C	

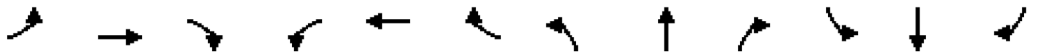
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	22.4	8.8	17.3	6.3	21.3	5.9	20.2
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	11.0	53.0	30.0	26.0	18.0	46.0	15.0	41.0
Max Q Clear Time (g_c+I1), s	2.7	5.2	5.6	2.3	3.7	7.1	3.3	2.4
Green Ext Time (p_c), s	0.0	3.5	0.2	0.0	0.0	5.1	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	19.1
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	180	100	190	190	270	120	550	160	420	690	120
Future Volume (veh/h)	100	180	100	190	190	270	120	550	160	420	690	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	102	184	41	194	194	68	122	561	125	429	704	104
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	132	438	95	242	555	188	157	1013	221	559	1418	207
Arrive On Green	0.07	0.15	0.15	0.14	0.22	0.22	0.09	0.24	0.24	0.16	0.32	0.32
Sat Flow, veh/h	1767	2873	625	1767	2579	875	1767	4156	907	3428	4459	652
Grp Volume(v), veh/h	102	111	114	194	131	131	122	454	232	429	531	277
Grp Sat Flow(s),veh/h/ln	1767	1763	1736	1767	1763	1691	1767	1689	1686	1714	1689	1734
Q Serve(g_s), s	3.5	3.6	3.7	6.7	3.9	4.1	4.2	7.3	7.6	7.5	8.0	8.1
Cycle Q Clear(g_c), s	3.5	3.6	3.7	6.7	3.9	4.1	4.2	7.3	7.6	7.5	8.0	8.1
Prop In Lane	1.00		0.36	1.00		0.52	1.00		0.54	1.00		0.38
Lane Grp Cap(c), veh/h	132	269	265	242	379	364	157	823	411	559	1074	551
V/C Ratio(X)	0.77	0.41	0.43	0.80	0.34	0.36	0.78	0.55	0.57	0.77	0.50	0.50
Avail Cap(c_a), veh/h	424	1042	1026	706	1324	1270	480	1781	889	1369	2212	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	24.0	24.1	26.2	20.8	20.9	27.9	20.7	20.8	25.1	17.3	17.3
Incr Delay (d2), s/veh	3.6	1.0	1.1	2.3	0.5	0.6	3.1	0.6	1.2	0.8	0.4	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.5	1.5	2.7	1.5	1.6	1.8	2.6	2.8	2.8	2.7	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	32.1	25.0	25.2	28.5	21.4	21.5	31.0	21.3	22.0	25.9	17.6	18.0
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	B	B
Approach Vol, veh/h		327			456			808			1237	
Approach Delay, s/veh		27.3			24.4			22.9			20.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	20.7	12.6	14.1	10.6	25.3	8.7	18.1
Change Period (Y+Rc), s	5.0	5.4	4.0	4.6	5.0	5.4	4.0	4.6
Max Green Setting (Gmax), s	25.0	33.0	25.0	37.0	17.0	41.0	15.0	47.0
Max Q Clear Time (g_c+I1), s	9.5	9.6	8.7	5.7	6.2	10.1	5.5	6.1
Green Ext Time (p_c), s	0.7	4.3	0.2	1.3	0.1	5.5	0.1	1.6

Intersection Summary	
HCM 7th Control Delay, s/veh	22.7
HCM 7th LOS	C



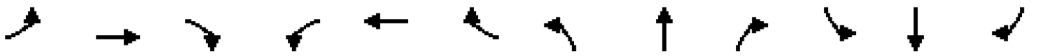
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	90	70	930	1040	500	920	0	730	200	0	130
Future Volume (veh/h)	50	90	70	930	1040	500	920	0	730	200	0	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	0	1856	1856	0	1856
Adj Flow Rate, veh/h	53	95	0	979	1095	0	968	0	445	211	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	0	3	3	0	3
Cap, veh/h	147	522		1027	1286		1017	0	0	1017	0	
Arrive On Green	0.08	0.15	0.00	0.30	0.36	0.00	0.30	0.00	0.00	0.30	0.00	0.00
Sat Flow, veh/h	1767	3618	0	3428	3526	1572	3428	968		3428	211	
Grp Volume(v), veh/h	53	95	0	979	1095	0	968	59.0		211	31.7	
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1714	1763	1572	1714	E		1714	C	
Q Serve(g_s), s	3.4	2.8	0.0	33.6	34.3	0.0	33.2			5.5		
Cycle Q Clear(g_c), s	3.4	2.8	0.0	33.6	34.3	0.0	33.2			5.5		
Prop In Lane	1.00		0.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	147	522		1027	1286		1017			1017		
V/C Ratio(X)	0.36	0.18		0.95	0.85		0.95			0.21		
Avail Cap(c_a), veh/h	177	522		1037	1286		1028			1028		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.00	1.00			1.00		
Uniform Delay (d), s/veh	52.0	44.8	0.0	41.2	35.1	0.0	41.4			31.6		
Incr Delay (d2), s/veh	1.5	0.8	0.0	2.6	0.7	0.0	17.6			0.1		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	1.6	1.3	0.0	14.2	14.5	0.0	16.1			2.3		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.5	45.5	0.0	43.8	35.8	0.0	59.0			31.7		
LnGrp LOS	D	D		D	D		E			C		
Approach Vol, veh/h		148			2074							
Approach Delay, s/veh		48.4			39.6							
Approach LOS		D			D							

Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	42.6	29.8	47.6		16.6	55.8	47.6					
Change Period (Y+Rc), s	6.7	12.0	12.0		6.7	12.0	12.0					
Max Green Setting (Gmax), s	36.3	17.0	36.0		12.0	41.3	36.0					
Max Q Clear Time (g_c+I1), s	35.6	4.8	35.2		5.4	36.3	7.5					
Green Ext Time (p_c), s	0.3	0.3	0.4		0.0	3.0	0.7					

Intersection Summary	
HCM 7th Control Delay, s/veh	45.0
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	320	520	100	30	1430	60	580	310	60	20	60	620
Future Volume (veh/h)	320	520	100	30	1430	60	580	310	60	20	60	620
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	344	559	48	32	1538	19	624	333	55	22	65	626
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	402	1358	603	46	1035	460	389	1253	205	37	397	916
Arrive On Green	0.12	0.39	0.39	0.03	0.29	0.29	0.22	0.41	0.41	0.02	0.21	0.21
Sat Flow, veh/h	3428	3526	1566	1767	3526	1564	1767	3031	496	1767	1856	2768
Grp Volume(v), veh/h	344	559	48	32	1538	19	624	192	196	22	65	626
Grp Sat Flow(s),veh/h/ln	1714	1763	1566	1767	1763	1564	1767	1763	1764	1767	1856	1384
Q Serve(g_s), s	13.4	15.8	2.6	2.4	40.0	1.2	30.0	9.8	10.0	1.7	3.9	26.6
Cycle Q Clear(g_c), s	13.4	15.8	2.6	2.4	40.0	1.2	30.0	9.8	10.0	1.7	3.9	26.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	402	1358	603	46	1035	460	389	729	729	37	397	916
V/C Ratio(X)	0.86	0.41	0.08	0.70	1.49	0.04	1.60	0.26	0.27	0.60	0.16	0.68
Avail Cap(c_a), veh/h	755	1358	603	389	1035	460	389	729	729	389	409	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.0	30.6	26.6	65.8	48.1	34.4	53.1	26.3	26.4	66.1	43.6	39.4
Incr Delay (d2), s/veh	2.1	0.2	0.1	7.1	223.6	0.0	283.1	0.2	0.2	5.7	0.2	2.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	6.7	1.0	1.2	49.5	0.5	43.8	4.2	4.2	0.8	1.8	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.0	30.8	26.6	72.9	271.7	34.4	336.2	26.5	26.6	71.9	43.8	41.4
LnGrp LOS	E	C	C	E	F	C	F	C	C	E	D	D
Approach Vol, veh/h		951			1589			1012			713	
Approach Delay, s/veh		41.5			264.8			217.5			42.6	
Approach LOS		D			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	57.9	34.5	35.3	21.0	45.4	7.3	62.5
Change Period (Y+Rc), s	5.0	5.4	4.5	6.2	5.0	5.4	4.5	6.2
Max Green Setting (Gmax), s	30.0	40.0	30.0	30.0	30.0	40.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	4.4	17.8	32.0	28.6	15.4	42.0	3.7	12.0
Green Ext Time (p_c), s	0.0	3.8	0.0	0.5	0.6	0.0	0.0	2.0

Intersection Summary		
HCM 7th Control Delay, s/veh		166.6
HCM 7th LOS		F

Notes

User approved pedestrian interval to be less than phase max green.

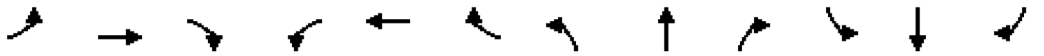


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	230	60	610	240	40	470
Future Volume (veh/h)	230	60	610	240	40	470
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	247	17	656	195	43	505
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	340	303	1433	419	85	2722
Arrive On Green	0.19	0.19	0.37	0.37	0.05	0.54
Sat Flow, veh/h	1767	1572	4052	1135	1767	5233
Grp Volume(v), veh/h	247	17	569	282	43	505
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1642	1767	1689
Q Serve(g_s), s	4.9	0.3	4.8	4.9	0.9	1.9
Cycle Q Clear(g_c), s	4.9	0.3	4.8	4.9	0.9	1.9
Prop In Lane	1.00	1.00		0.69	1.00	
Lane Grp Cap(c), veh/h	340	303	1246	606	85	2722
V/C Ratio(X)	0.73	0.06	0.46	0.47	0.51	0.19
Avail Cap(c_a), veh/h	2296	2043	3963	1927	543	8112
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	12.3	9.0	9.0	17.4	4.4
Incr Delay (d2), s/veh	3.0	0.1	0.3	0.6	1.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.1	1.2	1.3	0.3	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	17.1	12.4	9.2	9.6	19.1	4.5
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	264		851			548
Approach Delay, s/veh	16.8		9.3			5.6
Approach LOS	B		A			A

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		12.2	6.3	18.9		25.2
Change Period (Y+Rc), s		5.0	4.5	5.1		5.1
Max Green Setting (Gmax), s		48.6	11.5	43.9		59.9
Max Q Clear Time (g_c+I1), s		6.9	2.9	6.9		3.9
Green Ext Time (p_c), s		0.8	0.0	6.5		3.8

Intersection Summary	
HCM 7th Control Delay, s/veh	9.3
HCM 7th LOS	A

Notes
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	230	40	40	250	60	10	10	20	20	10	40
Future Volume (veh/h)	40	230	40	40	250	60	10	10	20	20	10	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	48	277	36	48	301	55	12	12	0	24	12	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	71	1053	135	71	1000	180	22	297	252	41	317	269
Arrive On Green	0.04	0.34	0.34	0.04	0.34	0.34	0.01	0.16	0.00	0.02	0.17	0.00
Sat Flow, veh/h	1767	3139	404	1767	2979	537	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	48	154	159	48	176	180	12	12	0	24	12	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1779	1767	1763	1754	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	1.2	2.9	3.0	1.2	3.4	3.4	0.3	0.2	0.0	0.6	0.2	0.0
Cycle Q Clear(g_c), s	1.2	2.9	3.0	1.2	3.4	3.4	0.3	0.2	0.0	0.6	0.2	0.0
Prop In Lane	1.00		0.23	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	592	597	71	592	589	22	297	252	41	317	269
V/C Ratio(X)	0.68	0.26	0.27	0.68	0.30	0.30	0.55	0.04	0.00	0.59	0.04	0.00
Avail Cap(c_a), veh/h	857	2138	2158	857	2138	2127	390	1105	936	623	1350	1144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	21.5	11.0	11.0	21.5	11.1	11.1	22.3	16.1	0.0	21.9	15.7	0.0
Incr Delay (d2), s/veh	4.2	0.5	0.5	4.2	0.6	0.6	7.7	0.1	0.0	5.0	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	1.0	0.5	1.1	1.2	0.2	0.1	0.0	0.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.7	11.5	11.5	25.7	11.7	11.8	30.0	16.2	0.0	26.9	15.8	0.0
LnGrp LOS	C	B	B	C	B	B	C	B		C	B	
Approach Vol, veh/h		361			404			24			36	
Approach Delay, s/veh		13.4			13.4			23.1			23.2	
Approach LOS		B			B			C			C	

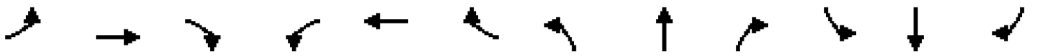
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	21.2	5.0	13.3	5.8	21.2	4.6	13.8
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	22.0	55.0	16.0	27.0	22.0	55.0	10.0	33.0
Max Q Clear Time (g_c+I1), s	3.2	5.0	2.6	2.2	3.2	5.4	2.3	2.2
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.0	4.6	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	14.1
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	70	20	60	180	190	140	720	110	240	400	150
Future Volume (veh/h)	50	70	20	60	180	190	140	720	110	240	400	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	55	77	2	66	198	41	154	791	105	264	440	111
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	92	554	14	102	478	97	199	1445	190	397	1309	320
Arrive On Green	0.05	0.16	0.16	0.06	0.16	0.16	0.11	0.32	0.32	0.12	0.32	0.32
Sat Flow, veh/h	1767	3510	91	1767	2915	591	1767	4525	597	3428	4058	991
Grp Volume(v), veh/h	55	39	40	66	118	121	154	589	307	264	364	187
Grp Sat Flow(s),veh/h/ln	1767	1763	1838	1767	1763	1743	1767	1689	1745	1714	1689	1672
Q Serve(g_s), s	1.7	1.0	1.0	2.0	3.3	3.4	4.6	7.8	7.9	4.0	4.5	4.7
Cycle Q Clear(g_c), s	1.7	1.0	1.0	2.0	3.3	3.4	4.6	7.8	7.9	4.0	4.5	4.7
Prop In Lane	1.00		0.05	1.00		0.34	1.00		0.34	1.00		0.59
Lane Grp Cap(c), veh/h	92	278	290	102	289	286	199	1078	557	397	1089	539
V/C Ratio(X)	0.60	0.14	0.14	0.64	0.41	0.42	0.77	0.55	0.55	0.67	0.33	0.35
Avail Cap(c_a), veh/h	390	1276	1331	422	1309	1294	812	2892	1494	1323	2643	1309
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	19.7	19.7	25.1	20.4	20.4	23.5	15.3	15.3	23.1	14.0	14.1
Incr Delay (d2), s/veh	2.3	0.2	0.2	2.5	0.9	1.0	2.4	0.4	0.9	0.7	0.2	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.4	0.4	0.8	1.3	1.3	1.8	2.5	2.7	1.5	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	27.6	20.0	19.9	27.6	21.3	21.4	25.9	15.7	16.2	23.8	14.2	14.4
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		134			305			1050			815	
Approach Delay, s/veh		23.1			22.7			17.3			17.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.3	22.8	7.2	13.2	11.1	23.0	6.8	13.5
Change Period (Y+Rc), s	5.0	5.4	4.0	4.6	5.0	5.4	4.0	4.6
Max Green Setting (Gmax), s	21.0	46.6	13.0	39.4	25.0	42.6	12.0	40.4
Max Q Clear Time (g_c+I1), s	6.0	9.9	4.0	3.0	6.6	6.7	3.7	5.4
Green Ext Time (p_c), s	0.4	6.4	0.0	0.4	0.2	3.6	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	18.4
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	396	160	760	410	266	360	0	743	505	0	120
Future Volume (veh/h)	100	396	160	760	410	266	360	0	743	505	0	120
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	0	1856	1856	0	1856
Adj Flow Rate, veh/h	106	421	0	809	436	0	383	0	697	537	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	3	0	3	3	0	3
Cap, veh/h	185	997		895	1547		607	0	0	607	0	
Arrive On Green	0.10	0.28	0.00	0.26	0.44	0.00	0.18	0.00	0.00	0.18	0.00	0.00
Sat Flow, veh/h	1767	3618	0	3428	3526	1572	3428	383		3428	537	
Grp Volume(v), veh/h	106	421	0	809	436	0	383	43.5		537	56.2	
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1714	1763	1572	1714	D		1714	E	
Q Serve(g_s), s	6.3	10.7	0.0	25.1	8.7	0.0	11.4			16.8		
Cycle Q Clear(g_c), s	6.3	10.7	0.0	25.1	8.7	0.0	11.4			16.8		
Prop In Lane	1.00		0.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	185	997		895	1547		607			607		
V/C Ratio(X)	0.57	0.42		0.90	0.28		0.63			0.88		
Avail Cap(c_a), veh/h	214	997		1007	1547		686			686		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.74	0.74	0.00	1.00			1.00		
Uniform Delay (d), s/veh	46.9	32.1	0.0	39.3	19.8	0.0	41.9			44.2		
Incr Delay (d2), s/veh	2.8	1.3	0.0	8.2	0.3	0.0	1.5			12.1		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	2.9	4.7	0.0	11.3	3.6	0.0	4.8			8.0		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.7	33.5	0.0	47.5	20.1	0.0	43.5			56.2		
LnGrp LOS	D	C		D	C		D			E		
Approach Vol, veh/h		527			1245							
Approach Delay, s/veh		36.7			37.9							
Approach LOS		D			D							

Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	35.4	43.1	31.5		18.2	60.3	31.5					
Change Period (Y+Rc), s	6.7	12.0	12.0		6.7	12.0	12.0					
Max Green Setting (Gmax), s	32.3	25.0	22.0		13.3	44.0	22.0					
Max Q Clear Time (g_c+I1), s	27.1	12.7	13.4		8.3	10.7	18.8					
Green Ext Time (p_c), s	1.6	2.1	0.9		0.1	3.0	0.7					

Intersection Summary	
HCM 7th Control Delay, s/veh	42.1
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	547	907	210	40	593	90	120	300	100	110	280	823
Future Volume (veh/h)	547	907	210	40	593	90	120	300	100	110	280	823
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	576	955	126	42	624	23	126	316	83	116	295	625
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	670	1451	645	64	888	394	158	655	169	147	427	1178
Arrive On Green	0.20	0.41	0.41	0.04	0.25	0.25	0.09	0.24	0.24	0.08	0.23	0.23
Sat Flow, veh/h	3428	3526	1567	1767	3526	1563	1767	2769	716	1767	1856	2768
Grp Volume(v), veh/h	576	955	126	42	624	23	126	199	200	116	295	625
Grp Sat Flow(s),veh/h/ln	1714	1763	1567	1767	1763	1563	1767	1763	1721	1767	1856	1384
Q Serve(g_s), s	14.7	19.8	4.7	2.1	14.6	1.0	6.3	8.8	9.1	5.8	13.2	15.2
Cycle Q Clear(g_c), s	14.7	19.8	4.7	2.1	14.6	1.0	6.3	8.8	9.1	5.8	13.2	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	670	1451	645	64	888	394	158	417	407	147	427	1178
V/C Ratio(X)	0.86	0.66	0.20	0.66	0.70	0.06	0.80	0.48	0.49	0.79	0.69	0.53
Avail Cap(c_a), veh/h	1134	1555	691	584	1555	689	584	583	569	584	614	1457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.3	21.5	17.1	43.2	30.8	25.8	40.5	29.8	29.9	40.8	32.0	19.3
Incr Delay (d2), s/veh	1.5	0.9	0.1	4.3	1.0	0.1	3.4	0.8	0.9	3.5	2.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	7.9	1.6	1.0	6.1	0.4	2.8	3.7	3.7	2.6	5.9	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.8	22.5	17.2	47.5	31.9	25.8	43.9	30.6	30.8	44.3	34.0	19.7
LnGrp LOS	D	C	B	D	C	C	D	C	C	D	C	B
Approach Vol, veh/h		1657			689			525			1036	
Approach Delay, s/veh		27.1			32.6			33.9			26.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	42.7	12.6	27.1	22.7	28.3	12.0	27.7
Change Period (Y+Rc), s	5.0	5.4	4.5	6.2	5.0	5.4	4.5	6.2
Max Green Setting (Gmax), s	30.0	40.0	30.0	30.0	30.0	40.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	4.1	21.8	8.3	17.2	16.7	16.6	7.8	11.1
Green Ext Time (p_c), s	0.0	6.8	0.1	3.7	1.0	4.3	0.1	2.2

Intersection Summary	
HCM 7th Control Delay, s/veh	28.8
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	263	111	750	287	80	930
Future Volume (veh/h)	263	111	750	287	80	930
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	30	781	240	83	969
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	365	325	1509	459	128	2868
Arrive On Green	0.21	0.21	0.39	0.39	0.07	0.57
Sat Flow, veh/h	1767	1572	4010	1170	1767	5233
Grp Volume(v), veh/h	274	30	685	336	83	969
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1636	1767	1689
Q Serve(g_s), s	6.5	0.7	6.9	7.0	2.0	4.6
Cycle Q Clear(g_c), s	6.5	0.7	6.9	7.0	2.0	4.6
Prop In Lane	1.00	1.00		0.72	1.00	
Lane Grp Cap(c), veh/h	365	325	1326	642	128	2868
V/C Ratio(X)	0.75	0.09	0.52	0.52	0.65	0.34
Avail Cap(c_a), veh/h	1775	1580	3263	1581	657	7291
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	14.3	10.3	10.3	20.1	5.2
Incr Delay (d2), s/veh	3.1	0.1	0.3	0.7	2.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.2	1.9	2.0	0.8	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	19.7	14.4	10.6	11.0	22.1	5.2
LnGrp LOS	B	B	B	B	C	A
Approach Vol, veh/h	304		1021			1052
Approach Delay, s/veh	19.2		10.7			6.6
Approach LOS	B		B			A

Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		14.2	7.7	22.5		30.2
Change Period (Y+Rc), s		5.0	4.5	5.1		5.1
Max Green Setting (Gmax), s		44.6	16.5	42.9		63.9
Max Q Clear Time (g_c+I1), s		8.5	4.0	9.0		6.6
Green Ext Time (p_c), s		0.9	0.1	8.1		8.4

Intersection Summary	
HCM 7th Control Delay, s/veh	10.0
HCM 7th LOS	A

Notes
User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	267	10	20	304	110	40	10	40	116	10	100
Future Volume (veh/h)	51	267	10	20	304	110	40	10	40	116	10	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	57	297	9	22	338	94	44	11	1	129	11	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	75	1066	32	37	773	212	63	385	324	168	495	417
Arrive On Green	0.04	0.31	0.31	0.02	0.28	0.28	0.04	0.21	0.21	0.10	0.27	0.27
Sat Flow, veh/h	1767	3493	106	1767	2729	747	1767	1856	1564	1767	1856	1564
Grp Volume(v), veh/h	57	150	156	22	216	216	44	11	1	129	11	15
Grp Sat Flow(s),veh/h/ln	1767	1763	1836	1767	1763	1713	1767	1856	1564	1767	1856	1564
Q Serve(g_s), s	1.7	3.5	3.5	0.7	5.4	5.6	1.3	0.3	0.0	3.8	0.2	0.4
Cycle Q Clear(g_c), s	1.7	3.5	3.5	0.7	5.4	5.6	1.3	0.3	0.0	3.8	0.2	0.4
Prop In Lane	1.00		0.06	1.00		0.44	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	75	538	560	37	500	485	63	385	324	168	495	417
V/C Ratio(X)	0.76	0.28	0.28	0.60	0.43	0.44	0.70	0.03	0.00	0.77	0.02	0.04
Avail Cap(c_a), veh/h	525	1767	1840	328	1571	1527	492	896	755	984	1413	1191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	14.2	14.2	26.1	15.8	15.8	25.7	17.0	16.9	23.8	14.6	14.6
Incr Delay (d2), s/veh	5.7	0.6	0.6	5.7	1.3	1.4	5.0	0.1	0.0	2.7	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.3	1.3	0.3	2.1	2.1	0.6	0.1	0.0	1.6	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.2	14.8	14.8	31.8	17.0	17.2	30.7	17.1	16.9	26.5	14.6	14.7
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		363			454			56			155	
Approach Delay, s/veh		17.4			17.8			27.8			24.5	
Approach LOS		B			B			C			C	

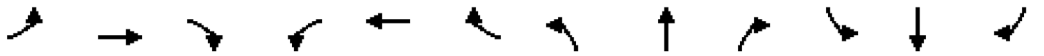
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	22.4	9.1	17.2	6.3	21.3	5.9	20.4
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	10.0	54.0	30.0	26.0	16.0	48.0	15.0	41.0
Max Q Clear Time (g_c+I1), s	2.7	5.5	5.8	2.3	3.7	7.6	3.3	2.4
Green Ext Time (p_c), s	0.0	3.8	0.2	0.0	0.0	5.6	0.0	0.2

Intersection Summary	
HCM 7th Control Delay, s/veh	19.2
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	180	109	190	190	270	135	550	160	420	690	129
Future Volume (veh/h)	114	180	109	190	190	270	135	550	160	420	690	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	116	184	35	194	194	56	138	561	125	429	704	113
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	150	445	83	242	550	154	177	1015	221	560	1353	215
Arrive On Green	0.08	0.15	0.15	0.14	0.20	0.20	0.10	0.24	0.24	0.16	0.31	0.31
Sat Flow, veh/h	1767	2961	552	1767	2713	761	1767	4156	907	3428	4403	699
Grp Volume(v), veh/h	116	108	111	194	124	126	138	454	232	429	538	279
Grp Sat Flow(s),veh/h/ln	1767	1763	1750	1767	1763	1712	1767	1689	1686	1714	1689	1726
Q Serve(g_s), s	4.0	3.5	3.6	6.6	3.8	3.9	4.7	7.3	7.5	7.5	8.2	8.3
Cycle Q Clear(g_c), s	4.0	3.5	3.6	6.6	3.8	3.9	4.7	7.3	7.5	7.5	8.2	8.3
Prop In Lane	1.00		0.32	1.00		0.44	1.00		0.54	1.00		0.41
Lane Grp Cap(c), veh/h	150	265	263	242	358	347	177	825	412	560	1038	530
V/C Ratio(X)	0.77	0.41	0.42	0.80	0.35	0.36	0.78	0.55	0.56	0.77	0.52	0.53
Avail Cap(c_a), veh/h	454	1047	1039	709	1301	1264	539	1789	893	1376	2114	1080
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	24.0	24.0	26.1	21.3	21.4	27.4	20.6	20.6	24.9	17.8	17.8
Incr Delay (d2), s/veh	3.2	1.0	1.1	2.3	0.6	0.6	2.8	0.6	1.2	0.8	0.4	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.4	1.5	2.7	1.5	1.5	2.0	2.6	2.8	2.8	2.8	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.2	25.0	25.1	28.4	21.9	22.0	30.2	21.1	21.9	25.8	18.2	18.6
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	B	B
Approach Vol, veh/h		335			444			824			1246	
Approach Delay, s/veh		27.1			24.8			22.8			20.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.2	20.6	12.5	14.0	11.2	24.5	9.3	17.2
Change Period (Y+Rc), s	5.0	5.4	4.0	4.6	5.0	5.4	4.0	4.6
Max Green Setting (Gmax), s	25.0	33.0	25.0	37.0	19.0	39.0	16.0	46.0
Max Q Clear Time (g_c+I1), s	9.5	9.5	8.6	5.6	6.7	10.3	6.0	5.9
Green Ext Time (p_c), s	0.7	4.3	0.2	1.2	0.1	5.5	0.1	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	22.8
HCM 7th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	92	70	943	1041	509	920	0	736	202	0	130
Future Volume (veh/h)	50	92	70	943	1041	509	920	0	736	202	0	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	0	1856	1856	0	1856
Adj Flow Rate, veh/h	53	97	0	993	1096	0	968	0	450	213	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	0	3	3	0	3
Cap, veh/h	147	514		1035	1286		1017	0	0	1017	0	
Arrive On Green	0.08	0.15	0.00	0.30	0.36	0.00	0.30	0.00	0.00	0.30	0.00	0.00
Sat Flow, veh/h	1767	3618	0	3428	3526	1572	3428	968		3428	213	
Grp Volume(v), veh/h	53	97	0	993	1096	0	968	59.0		213	31.8	
Grp Sat Flow(s),veh/h/ln	1767	1763	0	1714	1763	1572	1714	E		1714	C	
Q Serve(g_s), s	3.4	2.9	0.0	34.2	34.4	0.0	33.2			5.6		
Cycle Q Clear(g_c), s	3.4	2.9	0.0	34.2	34.4	0.0	33.2			5.6		
Prop In Lane	1.00		0.00	1.00		1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	147	514		1035	1286		1017			1017		
V/C Ratio(X)	0.36	0.19		0.96	0.85		0.95			0.21		
Avail Cap(c_a), veh/h	177	514		1037	1286		1028			1028		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.09	0.09	0.00	1.00			1.00		
Uniform Delay (d), s/veh	52.0	45.0	0.0	41.2	35.1	0.0	41.4			31.7		
Incr Delay (d2), s/veh	1.5	0.8	0.0	3.0	0.7	0.0	17.6			0.1		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(50%),veh/ln	1.6	1.3	0.0	14.5	14.5	0.0	16.1			2.3		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.5	45.8	0.0	44.1	35.9	0.0	59.0			31.8		
LnGrp LOS	D	D		D	D		E			C		
Approach Vol, veh/h		150			2089							
Approach Delay, s/veh		48.6			39.8							
Approach LOS		D			D							

Timer - Assigned Phs	1	2	3		5	6	7					
Phs Duration (G+Y+Rc), s	42.9	29.5	47.6		16.6	55.8	47.6					
Change Period (Y+Rc), s	6.7	12.0	12.0		6.7	12.0	12.0					
Max Green Setting (Gmax), s	36.3	17.0	36.0		12.0	41.3	36.0					
Max Q Clear Time (g_c+I1), s	36.2	4.9	35.2		5.4	36.4	7.6					
Green Ext Time (p_c), s	0.1	0.3	0.4		0.0	3.0	0.7					

Intersection Summary	
HCM 7th Control Delay, s/veh	45.1
HCM 7th LOS	D

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	324	526	100	30	1431	60	580	310	60	20	60	642
Future Volume (veh/h)	324	526	100	30	1431	60	580	310	60	20	60	642
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	348	566	49	32	1539	19	624	333	55	22	65	650
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	406	1354	601	45	1027	456	386	1261	206	37	405	932
Arrive On Green	0.12	0.38	0.38	0.03	0.29	0.29	0.22	0.42	0.42	0.02	0.22	0.22
Sat Flow, veh/h	3428	3526	1566	1767	3526	1564	1767	3031	496	1767	1856	2768
Grp Volume(v), veh/h	348	566	49	32	1539	19	624	192	196	22	65	650
Grp Sat Flow(s),veh/h/ln	1714	1763	1566	1767	1763	1564	1767	1763	1764	1767	1856	1384
Q Serve(g_s), s	13.7	16.2	2.7	2.5	40.0	1.2	30.0	9.8	10.0	1.7	3.9	28.0
Cycle Q Clear(g_c), s	13.7	16.2	2.7	2.5	40.0	1.2	30.0	9.8	10.0	1.7	3.9	28.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	406	1354	601	45	1027	456	386	733	734	37	405	932
V/C Ratio(X)	0.86	0.42	0.08	0.71	1.50	0.04	1.62	0.26	0.27	0.60	0.16	0.70
Avail Cap(c_a), veh/h	749	1354	601	386	1027	456	386	733	734	386	405	932
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.4	31.0	26.9	66.4	48.7	34.9	53.7	26.3	26.3	66.7	43.5	39.5
Incr Delay (d2), s/veh	2.1	0.2	0.1	7.2	229.5	0.0	289.1	0.2	0.2	5.8	0.2	2.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	6.9	1.0	1.2	50.1	0.5	44.2	4.2	4.3	0.8	1.8	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.5	31.3	27.0	73.6	278.2	34.9	342.7	26.5	26.5	72.5	43.7	41.8
LnGrp LOS	E	C	C	E	F	C	F	C	C	E	D	D
Approach Vol, veh/h		963			1590			1012			737	
Approach Delay, s/veh		42.0			271.2			221.5			42.9	
Approach LOS		D			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	58.1	34.5	36.2	21.2	45.4	7.3	63.3
Change Period (Y+Rc), s	5.0	5.4	4.5	6.2	5.0	5.4	4.5	6.2
Max Green Setting (Gmax), s	30.0	40.0	30.0	30.0	30.0	40.0	30.0	30.0
Max Q Clear Time (g_c+I1), s	4.5	18.2	32.0	30.0	15.7	42.0	3.7	12.0
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.6	0.0	0.0	2.0

Intersection Summary	
HCM 7th Control Delay, s/veh	169.1
HCM 7th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.



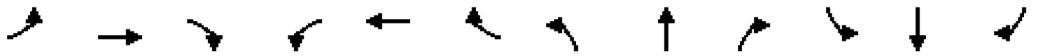
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	252	61	610	244	40	470
Future Volume (veh/h)	252	61	610	244	40	470
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	271	17	656	195	43	505
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	368	327	1414	413	85	2680
Arrive On Green	0.21	0.21	0.36	0.36	0.05	0.53
Sat Flow, veh/h	1767	1572	4052	1135	1767	5233
Grp Volume(v), veh/h	271	17	569	282	43	505
Grp Sat Flow(s),veh/h/ln	1767	1572	1689	1642	1767	1689
Q Serve(g_s), s	5.5	0.3	4.9	5.1	0.9	2.0
Cycle Q Clear(g_c), s	5.5	0.3	4.9	5.1	0.9	2.0
Prop In Lane	1.00	1.00		0.69	1.00	
Lane Grp Cap(c), veh/h	368	327	1229	598	85	2680
V/C Ratio(X)	0.74	0.05	0.46	0.47	0.51	0.19
Avail Cap(c_a), veh/h	2236	1990	3860	1877	529	7901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	12.2	9.3	9.4	17.8	4.7
Incr Delay (d2), s/veh	2.9	0.1	0.3	0.6	1.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.1	1.3	1.4	0.4	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	17.1	12.2	9.6	10.0	19.6	4.8
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	288		851			548
Approach Delay, s/veh	16.8		9.7			5.9
Approach LOS	B		A			A

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	13.0	6.3	19.1		25.4
Change Period (Y+Rc), s	5.0	4.5	5.1		5.1
Max Green Setting (Gmax), s	48.6	11.5	43.9		59.9
Max Q Clear Time (g_c+I1), s	7.5	2.9	7.1		4.0
Green Ext Time (p_c), s	0.9	0.0	6.5		3.8

Intersection Summary	
HCM 7th Control Delay, s/veh	9.7
HCM 7th LOS	A

Notes

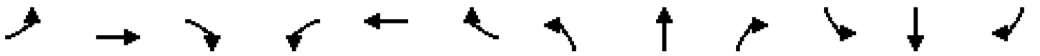
User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	249	40	40	263	60	10	10	20	29	10	40
Future Volume (veh/h)	41	249	40	40	263	60	10	10	20	29	10	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	49	300	37	48	317	56	12	12	0	35	12	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	71	1035	126	70	979	171	22	320	271	55	355	301
Arrive On Green	0.04	0.33	0.33	0.04	0.33	0.33	0.01	0.17	0.00	0.03	0.19	0.00
Sat Flow, veh/h	1767	3159	386	1767	2996	523	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	49	166	171	48	185	188	12	12	0	35	12	0
Grp Sat Flow(s),veh/h/ln	1767	1763	1783	1767	1763	1757	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	1.3	3.3	3.3	1.2	3.7	3.8	0.3	0.3	0.0	0.9	0.2	0.0
Cycle Q Clear(g_c), s	1.3	3.3	3.3	1.2	3.7	3.8	0.3	0.3	0.0	0.9	0.2	0.0
Prop In Lane	1.00		0.22	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	577	584	70	576	574	22	320	271	55	355	301
V/C Ratio(X)	0.69	0.29	0.29	0.68	0.32	0.33	0.55	0.04	0.00	0.63	0.03	0.00
Avail Cap(c_a), veh/h	835	2043	2066	835	2043	2036	379	1075	911	645	1354	1148
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	22.1	11.6	11.7	22.1	11.8	11.8	22.9	16.1	0.0	22.3	15.3	0.0
Incr Delay (d2), s/veh	4.3	0.6	0.6	4.3	0.7	0.7	7.8	0.1	0.0	4.4	0.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.1	1.2	0.5	1.3	1.3	0.2	0.1	0.0	0.4	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	26.4	12.2	12.2	26.4	12.5	12.5	30.7	16.2	0.0	26.7	15.4	0.0
LnGrp LOS	C	B	B	C	B	B	C	B		C	B	
Approach Vol, veh/h		386			421			24			47	
Approach Delay, s/veh		14.0			14.1			23.4			23.8	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	21.3	5.5	14.0	5.9	21.2	4.6	14.9
Change Period (Y+Rc), s	4.0	6.0	4.0	6.0	4.0	6.0	4.0	6.0
Max Green Setting (Gmax), s	22.0	54.0	17.0	27.0	22.0	54.0	10.0	34.0
Max Q Clear Time (g_c+I1), s	3.2	5.3	2.9	2.3	3.3	5.8	2.3	2.2
Green Ext Time (p_c), s	0.0	4.3	0.0	0.0	0.0	4.8	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	14.8
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	70	29	60	180	190	149	720	110	240	400	154
Future Volume (veh/h)	69	70	29	60	180	190	149	720	110	240	400	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	76	77	3	66	198	36	164	791	105	264	440	114
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	110	573	22	102	481	86	211	1434	189	395	1263	316
Arrive On Green	0.06	0.17	0.17	0.06	0.16	0.16	0.12	0.32	0.32	0.12	0.31	0.31
Sat Flow, veh/h	1767	3459	134	1767	2984	532	1767	4525	597	3428	4034	1011
Grp Volume(v), veh/h	76	39	41	66	115	119	164	589	307	264	366	188
Grp Sat Flow(s),veh/h/ln	1767	1763	1830	1767	1763	1754	1767	1689	1745	1714	1689	1668
Q Serve(g_s), s	2.3	1.0	1.1	2.0	3.2	3.4	5.0	8.0	8.0	4.1	4.6	4.8
Cycle Q Clear(g_c), s	2.3	1.0	1.1	2.0	3.2	3.4	5.0	8.0	8.0	4.1	4.6	4.8
Prop In Lane	1.00		0.07	1.00		0.30	1.00		0.34	1.00		0.61
Lane Grp Cap(c), veh/h	110	292	303	102	284	282	211	1070	553	395	1057	522
V/C Ratio(X)	0.69	0.13	0.14	0.65	0.41	0.42	0.78	0.55	0.56	0.67	0.35	0.36
Avail Cap(c_a), veh/h	448	1291	1340	416	1259	1252	833	2791	1442	1305	2485	1227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	19.6	19.6	25.4	20.8	20.8	23.6	15.6	15.6	23.4	14.6	14.7
Incr Delay (d2), s/veh	2.9	0.2	0.2	2.6	0.9	1.0	2.4	0.4	0.9	0.7	0.2	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.4	0.4	0.8	1.3	1.3	2.0	2.6	2.8	1.5	1.5	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.2	19.8	19.8	28.0	21.7	21.8	25.9	16.0	16.5	24.1	14.8	15.1
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		156			300			1060			818	
Approach Delay, s/veh		23.9			23.1			17.7			17.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	22.9	7.2	13.7	11.6	22.7	7.4	13.5
Change Period (Y+Rc), s	5.0	5.4	4.0	4.6	5.0	5.4	4.0	4.6
Max Green Setting (Gmax), s	21.0	45.6	13.0	40.4	26.0	40.6	14.0	39.4
Max Q Clear Time (g_c+I1), s	6.1	10.0	4.0	3.1	7.0	6.8	4.3	5.4
Green Ext Time (p_c), s	0.4	6.4	0.0	0.4	0.2	3.6	0.0	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	18.9
HCM 7th LOS	B

Appendix E: Site Access LOS Report

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	310	420	36	18	14
Future Vol, veh/h	17	310	420	36	18	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	19	344	467	40	19	15

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	507	0	-	0	697	253
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	210	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	1047	-	-	-	373	743
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	802	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1047	-	-	-	366	743
Mov Cap-2 Maneuver	-	-	-	-	366	-
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	802	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.44	0	12.99
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1047	-	-	-	366	743
HCM Lane V/C Ratio	0.018	-	-	-	0.052	0.02
HCM Ctrl Dly (s/v)	8.5	-	-	-	15.4	9.9
HCM Lane LOS	A	-	-	-	C	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	6	0	171	232	0
Future Vol, veh/h	0	6	0	171	232	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	6	0	190	258	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	129	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	894	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	894	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	9.06	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	894	-
HCM Lane V/C Ratio	-	0.007	-
HCM Ctrl Dly (s/v)	-	9.1	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	307	300	18	23	20
Future Vol, veh/h	4	307	300	18	23	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	83	83	83	83	95	95
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	370	361	22	24	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	383	0	-	0	567	192
Stage 1	-	-	-	-	372	-
Stage 2	-	-	-	-	195	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	1165	-	-	-	451	815
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	816	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1165	-	-	-	449	815
Mov Cap-2 Maneuver	-	-	-	-	449	-
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	816	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.1	0	11.64
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1165	-	-	-	449	815
HCM Lane V/C Ratio	0.004	-	-	-	0.054	0.026
HCM Ctrl Dly (s/v)	8.1	-	-	-	13.5	9.5
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0.1

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	9	0	111	75	0
Future Vol, veh/h	0	9	0	111	75	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	9	0	134	90	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	45	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.96	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.33	-	-	-	-
Pot Cap-1 Maneuver	0	1012	0	-	-	0
Stage 1	0	-	0	-	-	0
Stage 2	0	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	-	1012	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	8.59	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	1012	-
HCM Lane V/C Ratio	-	0.009	-
HCM Ctrl Dly (s/v)	-	8.6	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	0	-